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THE HEALTH of NORTHAMPTONSHIRE in 1962

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PART I

Report of the County Medical Officer of Health

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Report of the County Medical Officer of Health

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NORTHAMPTONSHIRE COUNTY COUNCIL.

October, 1963

To the Chairman and Members of the Northamptonshire County Council.

MR. CHAIRMAN, MY LORDS, LADIES AND GENTLEMEN,

I have the honour to present my first Annual Report, which is the sixty-sixth such report of the County Medical Officer of Health.

Introduction

This report is in a new form, as it consists of two parts, the first dealing with the work of the County Health Department, and the second with that of the School Health Service. I am responsible for both services but this responsibility is, in the case of the former, to the Health Committee and, in the case of the latter, to the Education Committee. Health, on the other hand, is a unity, and my responsibilities cover all ages in the community. It therefore seemed appropriate to deal comprehensively with the health of the county, although administrative reasons still oblige me to produce the two parts of my report as separate booklets.

It might be worth speculating briefly on the purpose of an Annual Report. Its main object is to review progress in the field of health during the year in question. This is useful as a means of comparing progress from year to year, and is also important because this progress can be achieved only with the co-operation of the general public. It is hoped that the circulation of this report will help the public to understand what is being achieved, and will help them to co-operate in the work of improving the health of the county for, without such co-operation, there can be little or no improvement.

There are several difficulties inherent in preparing a report of this kind. The chances of its being read are probably inversely proportional to its length ; yet if it is shortened too much it is difficult to deal adequately with various aspects of the work, especially where technical subjects require to be explained. It is also difficult maintaining freshness in a report, as there is a strong temptation simply to alter the figures each year, whilst leaving the main text untouched. The alternative to this fossilisation of presentation is to spend a large amount of time in preparing a totally different form of report year by year. This, in turn, can lead to the stage where so much effort is put into producing the report that there is neither time nor energy left to prepare plans for the future work of the department.

A middle course must therefore be steered and, in this report, I have tried to cover all aspects of the work of the County Health Department, although some have been dealt with in greater detail than have others. From year to year I will try to lay emphasis on different subjects and, over a cycle of years, it should thus be possible to present a comprehensive picture of the entire range of services. This report has been the work of many people, and my task has essentially been one of editing their contributions to give a reasonably standardised presentation. I have tried to express as many statistics as possible in the form of graphs, as this gives a quicker appreciation of trends than does the use of long tables of figures. I have also tried to keep statistics to the minimum consistent with conveying adequate information, and to bear in mind the difference between useful statistics from which conclusions can be drawn and a mere compilation of figures, variously divided and sub-divided.

Health of the County

The main indices of health in the county remain satisfactory, both the birth rate and infant mortality rate comparing favourably with those for England and Wales. The population had, by mid-1962, reached 300,960, and it is clear that a relatively rapid expansion of the county is in progress. This makes it particularly important that the development of the health services should keep pace with the expansion, especially if the relatively good mortality figures are to be maintained. The infant mortality rate was 19.54 per 1,000 live births compared with 21.4 for England and Wales.

On turning to deaths, those attributable to diseases of the heart and blood vessels remain great killers here as elsewhere in Britain. The scope for prevention in this group of disorders is at present limited, although there is no doubt that tobacco smoking plays a part in certain forms of cardiac disease, and that over-nutrition is likewise a factor.

Lung cancer

Next come deaths from cancer, and here there is rather more scope for prevention. This applies particularly to cancer of the lung, the major cause of which is smoking in general and cigarette smoking in particular. There was a total of 132 deaths from this unpleasant, virtually incurable, but preventable disorder compared with 114 in 1961 and, unless the populace can be encouraged to help themselves, the needless slaughter of over 26,000 a year from this disease will continue in Britain. In Northamptonshire, as elsewhere, the deaths from lung cancer (132) in 1962 dwarfed those from road accidents (37) ; yet the news value of the two is very different. Similarly, when one compares the public indifference to smokers' cancer with the near hysteria which seizes the populace in the presence of a handful of cases of smallpox, there seems to be something wrong with the sense of proportion of humanity at large. The Government has enjoined local health authorities to try to discourage people from smoking, and my department will do its best to carry out this task. It is, however, depressing to try to dissuade children from smoking in the absence of parental example and, whilst all adults have the right to die of lung cancer if they so desire, I entreat them not to encourage children to take up smoking as a result of copying their parents, for there is no doubt that this is a highly significant factor in determining whether children do or do not acquire the habit.

I would like to record my appreciation of the action of the Health Committee and its Sub-Committees in deciding that it would be inappropriate to smoke during meetings. This provides a good example of what can be done to limit if not to eliminate smoking, and perhaps a practical national beginning on these lines could be made by similarly limiting smoking in single deck buses, shops, theatres and cinemas. Another intermediate solution worthy of serious consideration would be to encourage the smoking of the relatively safer pipes and cigars rather than cigarettes, practical encouragement of this change being within the powers of national fiscal policy. I have no doubt that smoking, like all popular drug addictions, will eventually die out but, as a practitioner of preventive medicines, I am deeply concerned about the millions of lives which will be needlessly lost throughout the world in the interim. Great emotional fervour can be raised about the possibility of nuclear war—a catastrophe which has not yet occurred and which, one hopes, never will happen. Deaths from lung cancer and the other diseases in which smoking is a major causal factor, on the other hand, occur in their tens of thousands every year in this country. Yet the public conscience is not stirred, and one does not see rallies in Trafalgar Square chanting " Ban cigarettes ! " It is an interesting commentary on human nature.

Ten-year Plan

The most significant event of the year, and a milestone in the development of local authority health services, came with the instruction from the Minister of Health to prepare a ten-year

development plan complementary to the long-term plan for developing the hospital service. This provided a unique opportunity of reviewing past experience, looking critically at present services, and determining policies for the future. Medical needs are never static, and what was adequate for yesterday rarely meets the needs of to-morrow. My report entitled " A Ten-year Plan for the Development of Northamptonshire's Health Services " has already been published. It was considered by the Health Committee and subsequently by the County Council, and was accepted in principle. The first steps have already been taken to implement it, and I believe that this long-term type of planning will be very much in the interests of the community which my department serves.

The most important single factor in determining the success or failure of the ten-year plan will be our ability to attract adequate staff both as far as quantity and, more particularly, quality are concerned. There has, in recent years, been difficulty in obtaining medical staff, and especial difficulty in finding those with appropriate postgraduate qualifications. The introduction of the assisted D.P.H. course should do much to alleviate this. Dental officers are still hard to come by, and here the continued and expanding provision of modern facilities may help to attract them. Finding midwives for district work is likewise not easy, and the ten-year plan aims to ensure that every inducement is offered in the form of housing and adequate periods off-duty each week, coupled with steps designed to increase their professional interest. In the health visiting field we are fortunate in having a full staff, although this is partly due to the fact that our ratio of health visitors to population is somewhat lower than it should be. The ten-year plan aims to correct this and, by increasing the establishment slightly each year, it may well prove possible to maintain the service at full strength. We are fortunate in Northamptonshire in having a pleasant liaison with the local psychiatric hospital, St. Crispin, and this should assist in maintaining an adequate staff of social workers. Here, the main difficulty lies in the paucity of training facilities, for present demand far outstrips supply. A beginning, however, has been made in obtaining further training for the mental welfare officers, and it is hoped that this will expand in the future. As far as clerical staff is concerned, we have been more fortunate in obtaining a good supply of new recruits, and it should be emphasised that the work of the department depends on them just as it depends on the other staff whom I have mentioned.

Fluoridation

Another important event was the publication of the long-awaited report on the fluoridation studies in this country. Fluoridation is no new subject, and the Health Committee has been kept informed of developments over a period of about ten years. For some time the County Councils Association has been pressing the Minister of Health to permit the extension of fluoridation throughout the county in order that the dental health of children may be improved. In October, the County Health Committee welcomed the report from the Ministry of Health and declared itself in favour of fluoridation, this resolution being subsequently endorsed by the County Council.

Since then, there has inevitably been correspondence in the newspapers on the subject and this is to be welcomed, provided that it is at all times based on clear facts. It is, however, extremely easy to make wild assertions if there is no obligation to quote the studies (if any) on which these assertions are based.

An appendix to this report (page 79) consists of a copy of the statement dealing with fluoridation which was prepared for the County Council at the request of the Health Committee, and everyone interested in the subject should read all the publications to which reference is made. There are only three points which need be reiterated here. The first is that every one of us consumes fluoride in water and in food and, indeed, some 500,000 people in this country have always drunk water containing fluoride from natural sources at or above the suggested

level of one part per million. Secondly, it must be realised that there is no question of harm to health at this level, as many years have passed without any such evidence arising either amongst those drinking naturally fluoridated water, or those whose water has had its fluoride level artificially raised. The statement that there is some fundamental difference between the two types of fluoride is, in any case, scientifically incorrect. The third factor is that of cost, and great play has been made on the fact that much of the water supply is not used for drinking. It is still true, however, that fluoridation would work out between 6d. and 10d. per head per annum (compared with over 17/- per head for dental treatment), and I can think of few adults who would begrudge the few coppers involved for the sake of the teeth of successive generations of children.

Retirals

On May 30th, 1962, Dr. C. M. Smith retired from the post of County Medical Officer of Health and Principal School Medical Officer after a quarter of a century of service to Northamptonshire County Council. During that time he constantly strove to improve the services for which he was responsible, and his name was known and respected beyond the bounds of the county. The County Council has passed a resolution congratulating him on his work, to which I would like to add my own tribute.

Mr. A. E. Waller, Chief Inspector of Weights and Measures, retired in that same month after no less than forty-two years' service to the county, including twenty-five in charge of his department. Once again he was a man whose abilities were widely recognised, and who brought distinction to Northamptonshire.

Acknowledgment

My thanks are due to the entire staff of the Health Department for their support and help during 1962. It was a year of intense activity, and only the willing teamwork of all concerned brought this to a successful outcome.

In conclusion, I must express my gratitude to the chairmen and members of the various committees which I serve. They showed great kindness to me in my first months of office, and I look forward to happy co-operation in years to come.

I have the honour to be,

Your obedient servant,

J. J. A. REID,
County Medical Officer of Health.

STAFF

County Medical Officer of Health and Principal School Medical Officer:

C. M. SMITH, O.B.E., M.A., M.D., Ch.B., D.P.H. (*retired 31st May*)

J. J. A. REID, T.D., M.D., Ch.B., B.Sc., D.P.H. (*from 1st June*)

Deputy County Medical Officer of Health and Deputy Principal School Medical Officer:

A. GATHERER, M.D., Ch.B., D.P.H., D.I.H. (*from 4th June*)

Senior Assistant Medical Officer:

J. V. DYER, M.B., B.S., D.P.H. (*to 31st July*)

H. R. SIMPSON, M.B., Ch.B., D.P.H., D.C.H., D.Obst., R.C.O.G. (*from 1st August*)

Assistant Medical Officers:

P. C. BARRY, L.R.C.P., L.R.C.S. (*temporary—commenced 1st November*)

*P. X. BERMINGHAM, M.B., B.Ch., D.P.H.

MRS. M. V. CAPON, M.B., B.S.

Miss J. F. CROLL, M.B., Ch.B.

*MRS. J. M. ST. V. DAWKINS, M.B., B.S., D.P.H., D.C.H.

*J. V. L. FARQUHAR, M.A., M.R.C.S., L.R.C.P., D.P.H.

MISS M. C. GOODCHILD, M.R.C.S., L.R.C.P., D.C.H.

*F. R. N. LYNCH, M.B., Ch.B., D.P.H.

*A. LUCAS, L.R.C.P., L.R.C.S., L.R.F.P.S., D.P.H.

MISS M. SMAIL, M.R.C.S., L.R.C.P., D.P.H., D.C.H. (*retired 30th September*)

* Also District Medical Officers of Health.

Chief Dental Officer:

P. W. GIBSON, L.D.S.

Dental Officers:

F. E. ADAMS, L.R.C.P., L.R.C.S., L.D.S., R.C.S. (*to 20th September*)

MISS M. BROWN, L.D.S. (*from 1st August*)

R. J. H. CORFE, L.D.S.

R. D. HOPKINSON, L.D.S.

MRS. F. M. JONES, L.D.S.

C. M. PERRY, L.D.S.

Superintendent Nursing Officer:

MISS W. M. WILLIAMS, S.R.N., S.C.M., H.V.Cert., Q.N.

Deputy Superintendent Nursing Officers:

MISS S. H. BUCHANAN, S.R.N., S.C.M., H.V.Cert. (Health Visiting)

MISS N. TAYLORSON, S.R.N., S.C.M., H.V.Cert., M.T.D., Q.N. (Midwifery and Home Nursing)

Assistant Superintendent Nursing Officers:

MISS L. BOGLE, S.R.N., S.C.M., H.V.Cert., Q.N.

MISS I. C. ROBERTS, S.R.N., S.C.M., H.V.Cert., Q.N. (*to 10th July*)

Health Education Organiser:

MISS J. A. FORESTER, S.R.N., S.C.M., Q.N., P.H. Tutor's Cert.

Chief Clerk:

R. J. Bruce

County Ambulance Officer:

P. H. J. Wilkinson

Senior Mental Welfare Officer:

E. Towning, R.M.P.A.

Mental Welfare Officers:

Miss E. M. Bliss, S.R.N.
S. A. Crouch
Miss A. Gibson, M.A.
K. Greenwood, S.R.N., R.M.N.
B. F. Norman
Miss O. Towning, Dip. Social Studies (*from 23rd August*)

Mental Welfare Officers/Craft Instructors (Occupational Therapists):

Mrs. A. M. Jobbins, M.A.O.T.
Miss J. C. Moore, M.A.O.T. (*to 22nd July*)
Miss C. M. Mulhearn, M.A.O.T. (*from 13th August*)

Training Centre Supervisors:

Corby—Mrs. E. Cocker
Kettering Mixed—Miss F. L. Caswell†
Kettering Adult—W. Lewis†
Northampton—Mrs. M. B. Redley†
Wellingborough—Miss B. V. Miller†
Relief—Miss H. Griffin†

† Diploma for Teachers of the Mentally Handicapped.

Senior Speech Therapist:

Mrs. M. G. Vernum, L.C.S.T.

Speech Therapists:

Miss S. A. R. Bruce, L.C.S.T.
Miss J. A. French, L.C.S.T. (*commenced 3rd September*)
Mrs. L. Gilby, L.C.S.T. (*part-time*)
Mrs. G. Wilson, L.C.S.T. (*part-time*)

Home Help Organiser:

Miss E. Newell

VITAL STATISTICS

Area of the Administrative County	578,947 acres
Population (Census 1961)	292,771
,, 1962, Mid-year estimate	300,960
Structurally separate dwellings occupied (Census 1961)	96,552
Private households (Census 1961)	93,649
Rateable Value (April 1st, 1962)	£3,741,444
Actual product of a penny rate (1961-62)	£15,048

	Northamptonshire				England & Wales
	Male	*Female*	*Total*		
Live births	2,802	2,726	5,528		
Live birth rate per 1,000 population				18.37	18.0
Illegitimate live births per cent of total live births				4.97	
Stillbirths	45	38	83		
Stillbirth rate per 1,000 live and stillbirths				14.79	18.1
Total live and stillbirths	2,847	2,764	5,611		
Infant deaths	66	42	108		
Infant mortality rate :					
Total (per 1,000 live births)				19.54	21.4
Legitimate (per 1,000 legitimate live births)				18.08	
Illegitimate (per 1,000 illegitimate live births)				47.27	
Neonatal (first four weeks) mortality rate per 1,000 live births				13.75	15.1
Early neonatal (under 1 week) mortality rate per 1,000 live births				11.94	
Perinatal (stillbirths and deaths under 1 week combined) mortality rate per 1,000 live and stillbirths				26.55	
Maternal deaths (including abortion)				4	
Maternal mortality rate per 1,000 live and stillbirths				0.71	0.35

Population. The Registrar General estimated the resident mid-year population for 1962 to have been 300,960, compared with 295,850 in 1961. The estimated populations for the urban and rural areas were 166,950 and 134,010 respectively. The natural increase in population, i.e. the excess of births over deaths, totalled 2,195. The estimated increase in population was 5,110.

Deaths. The total number of deaths after adjusting for outward and inward transferable deaths, was 3,333, compared with 3,310 in 1961. The crude death-rate based on the mid-year estimated population was 11.07, compared with 11.18 in 1961. Cardiovascular disease accounted for 1,754 deaths (52.6% of the total), malignant disease for 594 (17.8%) and respiratory diseases for 349 (10.5%). There were 2,697 deaths in these three groups, which is 80.9% of the total deaths.

Lists of the causes of deaths, classified under the thirty-six headings of the International Statistical Classification of Diseases, Injuries and Causes of Death, 1948, are given in Tables VI

and VII (pages 75 to 78), whilst the history of the rate, together with other vital statistics for 1912-1962, are shown in graph form on page 11. Comparability factors for each urban and rural district, Tables Nos. VI (a) and VI (b) (pages 75 to 76), have been provided by the Registrar General for adjusting the local birth and death rates. The comparability factors make allowance for differences in age and sex distribution, and when multiplied by the crude birth and death rates of an area, make them comparable with the rates of other areas similarly adjusted.

Births. The number of live births assigned to the County was 5,528 (2,802 males and 2,726 females), compared with 5,337 in 1961, giving a birth rate of 18.37 per 1,000 population, compared with 18.0 for England and Wales.

Stillbirths. The number of stillbirths registered was 83 compared with 88 in the previous year. The rate per 1,000 total births was 14.79, compared with 16.22 for 1961, and with 18.1 for England and Wales.

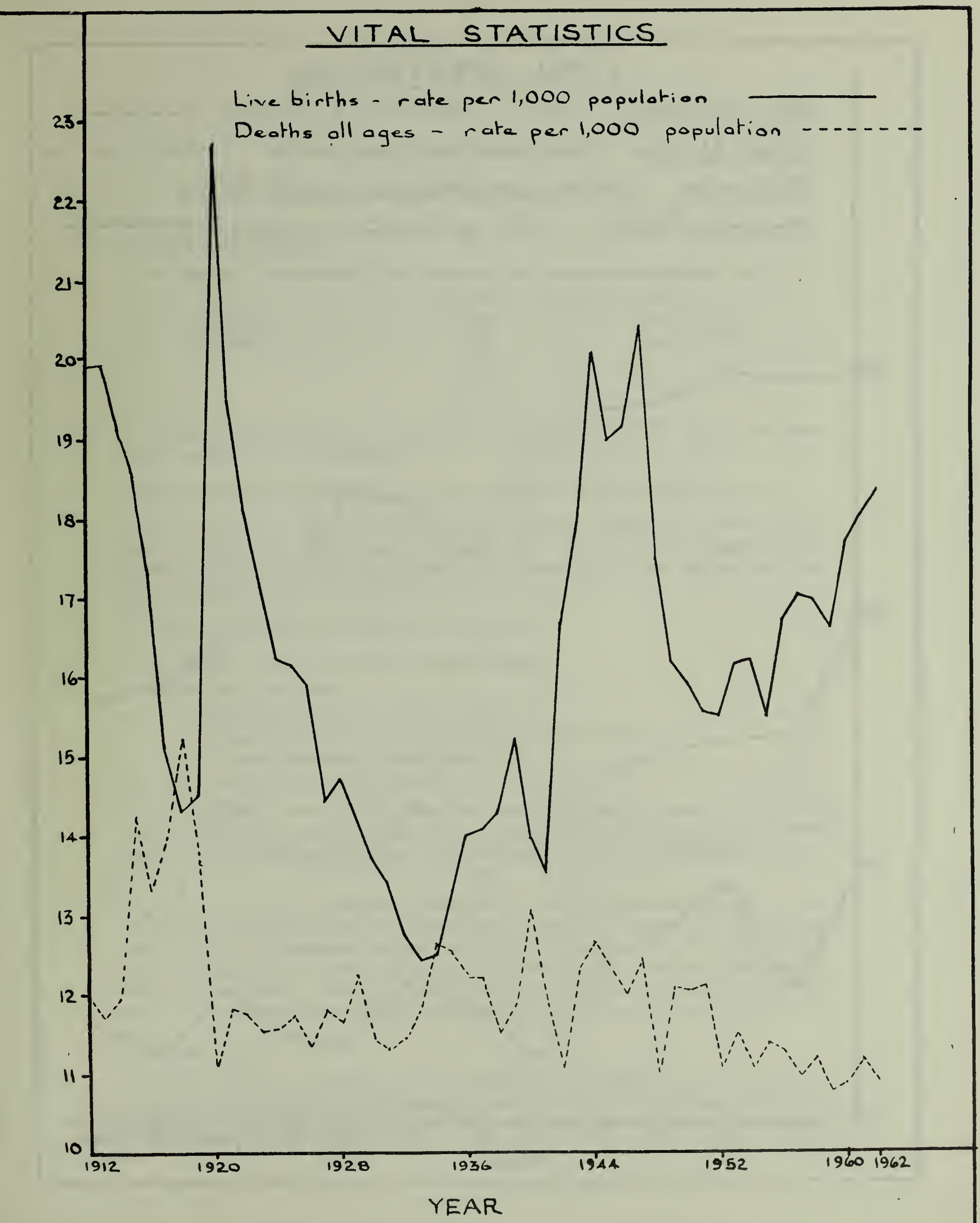
Infant Mortality. The number of infants who died before attaining their first birthday was 108 (66 males and 42 females), compared with 94 in 1961. Of these, 13 were illegitimate. The rate per 1,000 related live births was thus 19.54 compared with 21.4 for England and Wales. The history of the rate for the past thirteen years is shown in graph form on page 12, and an analysis of the apparent causes in 107 of the 108 deaths is given in Table II (page 23).

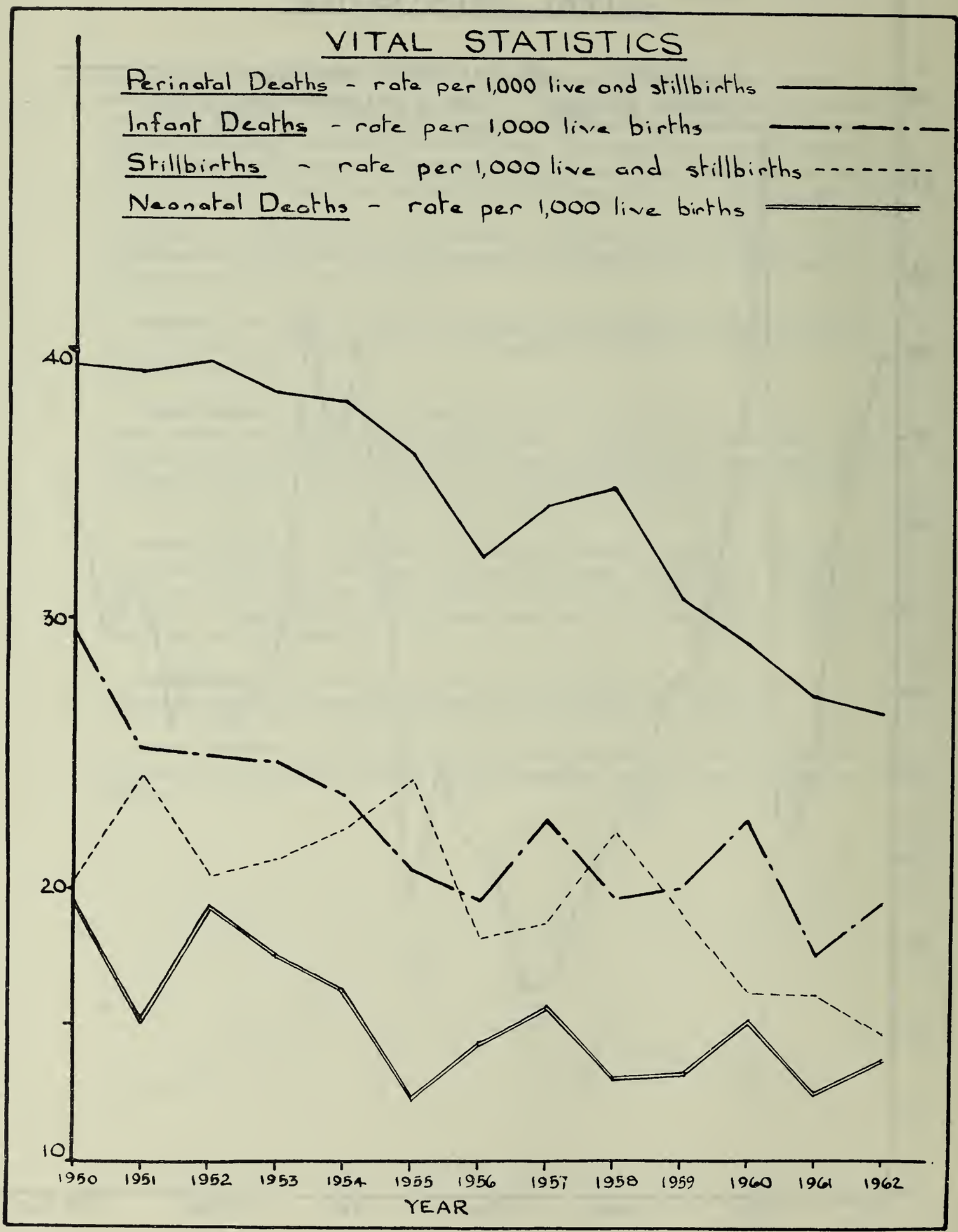
Neonatal Mortality. This sub-division of the infant mortality comprises all infant deaths within twenty-eight days of birth, and of the 108 infant deaths, 76 were classed as neonatal. The rate per 1,000 live births was 13.75 compared with 12.55 for 1961, and with 15.1 for England and Wales. The majority (66) of the 76 neonatal deaths were in the first week of life, the main causal factor being prematurity.

Perinatal Mortality. There was a total of 149 cases (83 stillbirths and 66 deaths under one week) in this category, the mortality rate being 26.55 per 1,000 live and stillbirths.

Maternal Mortality. Four women died from causes associated with childbirth compared with three for the previous year, giving a maternal mortality rate of 0.71 per 1,000 live and stillbirths.

VITAL STATISTICS




VITAL STATISTICS
Perinatal Deaths - rate per 1,000 live and stillbirths
Infant Deaths - rate per 1,000 live births
Stillbirths - rate per 1,000 live and stillbirths
Neonatal Deaths - rate per 1,000 live births
40
30
20
10
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962
YEAR

CARE OF MOTHERS

(Section 22—National Health Service Act, 1946)

(i) Notification of Births

The number of births notified, after adjustment for transferred notifications, was :

	Live Births	*Stillbirths*	*Total*
Domiciliary	1,539	6	1,545 (28.4%)
Hospital	3,825	65	3,890 (71.6%)
	5,364	71	5,435

Details of all notifications are transmitted promptly to the health visitors, who begin visiting immediately after the tenth day.

(ii) Premature Infants (5½lb. or less at birth irrespective of the period of gestation).

There were 244 premature live births and 14 stillbirths in hospital, and 32 live and one stillbirth at home. The total survival rate has for several years been over 91% and in 1962 it was 94.9%. This satisfactory record reflects the professional skill and facilities which are nowadays available for the care of premature babies.

(iii) Deaths Ascribed to Pregnancy or Childbirth

The Registrar General reported four maternal deaths.

The causes of death were :

(a) Pulmonary embolus ; Cæsarian section.
(b) Broncho-pneumonia ; manic psychosis following delivery.
(c) Abortion procured by patient herself.
(d) Septic abortion, criminally procured.

The first death occurred in Northampton General Hospital, the second in St. Crispin Hospital, the third at home and the fourth in the Hospital of St. Cross, Rugby. The maternal death rate per 1,000 live and stillbirths was 0.71 compared with a rate for England and Wales of 0.35.

The first two of these deaths were unavoidable. Pulmonary embolism is a rare, but ever-present risk not merely in Cæsarian section but also in many other operations ; whilst mental illness is likewise an infrequent accompaniment of the puerperal period. Criminal abortion, whether procured by the patient or by some other person is, on the other hand, a sad and unnecessary cause of death. There is no doubt that such abortions are far from uncommon, and deaths such as the two which occurred underline the grave dangers which are involved.

(iv) Blood Tests

Efficient antenatal care calls for blood examinations to determine the Rh group of the mother and to check her level of hæmoglobin throughout pregnancy. The care of expectant mothers may devolve upon the family doctor, the hospital, the district midwife, or a combination

of these. Arrangements have been made for county midwives who desire them to be issued with Tallqvist hæmoglobinometers, which enable them to make approximate estimations of the hæmoglobin level of blood and thus to refer those who appear to be anæmic for more extensive investigations.

(v) Relaxation and Parentcraft Classes

Details of these classes are given in the section on Health Education (page 34).

(vi) Maternity Accommodation

At the request of the hospital authorities, the booking of cases on social grounds continued to be carried out by the County Health Department, as district midwives are well acquainted with the domestic circumstances of each case. The arrangements have worked smoothly, but it is impossible to accommodate every mother who applies for hospital confinement.

The numbers of cases booked each month were :

Barratt Maternity Home, Northampton	32-40
St. Mary's Hospital, Kettering	26
Corby Maternity Unit	40
Park Hospital, Wellingborough	64

(viii) Care of Unmarried Mothers

The County Council assisted forty-eight unmarried mothers by accepting financial responsibility for their stay in St. Saviour's Diocesan Maternity Home, Northampton, and at similar homes elsewhere, each girl being required to pay 46/- per week towards the cost, if she was receiving the full maternity allowance. Contributions received from other sources were also deducted from the final account.

The Peterborough Diocesan Family and Social Welfare Council received a grant of £1,200 from the County Council for their work in the community. Of the 275 illegitimate births in the County, 117 were helped by social workers, 98 of these being first pregnancies. The ages of the mothers ranged from 14 to over 30 years. The age group 14-21 years accounted for 75 of the 117 cases.

Enquiries made amongst a group of the mothers six months after confinement revealed that forty babies remained with their mothers or grandmothers, and thirty-eight had been adopted.

The record of illegitimacy in the county over the past 25 years is given in the table which follows. This shows that, since the wartime increase, the figure has varied remarkably little, remaining in the region of 4 to 5 per cent of all births.

STATISTICS OF ILLEGITIMACY

Year	Number of live births			Percentage of illegitimate births	No. of unmarried mothers assisted by grants	Infant Mortality Rate	
	Legitimate	Illegitimate	Total			Legitimate	Illegitimate
1938	3065	119	3184	3.7	13	39.15	92.43
1939	3211	125	3336	3.7	14	40.13	47.61
1940	3241	122	3363	3.6	8	46.90	89.43
1941	3356	155	3511	4.4	11	47.93	51.61
1942	3842	220	4062	5.4	20	32.53	66.18
1943	3922	288	4210	6.9	17	39.01	59.02
1944	4293	391	4684	8.3	17	35.87	61.38
1945	3866	474	4340	10.9	9	37.50	52.74
1946	4221	310	4531	6.8	14	37.19	32.26
1947	4636	269	4905	5.5	24	34.08	52.04
1948	4110	216	4326	4.9	22	29.68	69.44
1949	3874	182	4056	4.6	27	32.52	60.44
1950	3812	183	3995	4.6	26	29.38	32.79
1951	3795	202	3997	5.0	26	25.30	24.75
1952	3831	175	4006	4.4	33	24.80	28.57
1953	4077	173	4250	4.1	46	23.79	46.24
1954	4080	218	4298	5.1	42	24.02	13.76
1955	3996	187	4183	4.5	41	20.02	37.43
1956	4370	201	4571	4.4	46	19.67	19.90
1957	4555	193	4748	4.1	38	21.95	36.20
1958	4623	186	4809	3.8	42	20.11	10.75
1959	4601	199	4800	4.1	41	20.43	15.08
1960	4970	213	5183	4.1	49	22.53	23.47
1961	5065	272	5337	5.1	38	17.57	18.38
1962	5253	275	5528	4.9	48	18.08	47.27

(ix) Family Planning Clinics

Nineteen women attended the Northampton Women's Welfare Association Clinic, and two attended the Rugby Family Planning Clinic. Sessions at the County Council's own clinics at Corby and Kettering are held twice monthly. At Kettering, 102 women made a total of 372 attendances, and at Corby, 67 women made a total of 220 attendances.

CARE OF YOUNG CHILDREN

(Section 22—National Health Service Act, 1946)

(i) Child Welfare Centres

Two new centres at Doddington and Duston were opened, bringing the total number of fixed centres up to 60.

3,616 children under one year attended for the first time representing 65.4% of the total registered live births.

The total number of attendances by children under one year of age was 32,545, an increase of 1,629 over 1961. Attendances of children between the ages of one and five years also increased from 20,643 in 1961 to 21,310 in 1962. The increasing popularity of child welfare clinics is shown in the graphs (page 18) and 1962 broke all previous records in the use being made of these services by the mothers and children of Northamptonshire.

The year was also marked by the provision of new accommodation at Corby and Rushden and in the mobile clinic.

Beanfield Bungalow Hall, Corby

These premises consist of two bungalows with certain interior walls removed, so as to form a large hall, consulting-room, kitchen, toilets and vestibule. Originally the Bungalow Hall was provided by the Corby Development Corporation as a community centre, and was sub-let to various organisations and also to the Health Committee for child welfare sessions. In 1962, however, a new community hall was built, and the Health Committee took over the full tenancy of the Bungalow Hall on a seven-year lease. The premises were redecorated and re-equipped, and increasing use is being made of them for such activities as relaxation classes, play-centre, club for disabled persons, psychotherapy, as well as child welfare. In addition, the premises are let to certain organisations when not required for official use.

Health Clinic, Rectory Road, Rushden

This clinic, the plan of which is shown on page 19, was completed in September. The total cost, including furniture and equipment, was approximately £28,000. The new building, which brings under one roof all the Health Department services in Rushden, was officially opened on 25th October by Mrs. Enoch Powell, the wife of the Minister of Health. At present the activities of the clinic include child welfare, relaxation and mothercraft classes, speech therapy and dental treatment. It also serves as a base for the health visitors working in the Rushden and Higham Ferrers areas.

The District Welfare Officer and Registrar has an office on the lower ground floor.

Mobile Health Clinic

When Mrs. Powell opened the Rushden Health Clinic, she also inaugurated the Mobile Health Clinic.

In any county it is difficult to supply the same standard of amenities in rural as in urban districts, particularly in villages where the child population is too small to justify opening a

RUSHDEN HEALTH CLINIC

MRS. ENOCH POWELL SAMPLES THE DENTAL FACILITIES AFTER OPENING THE CLINIC

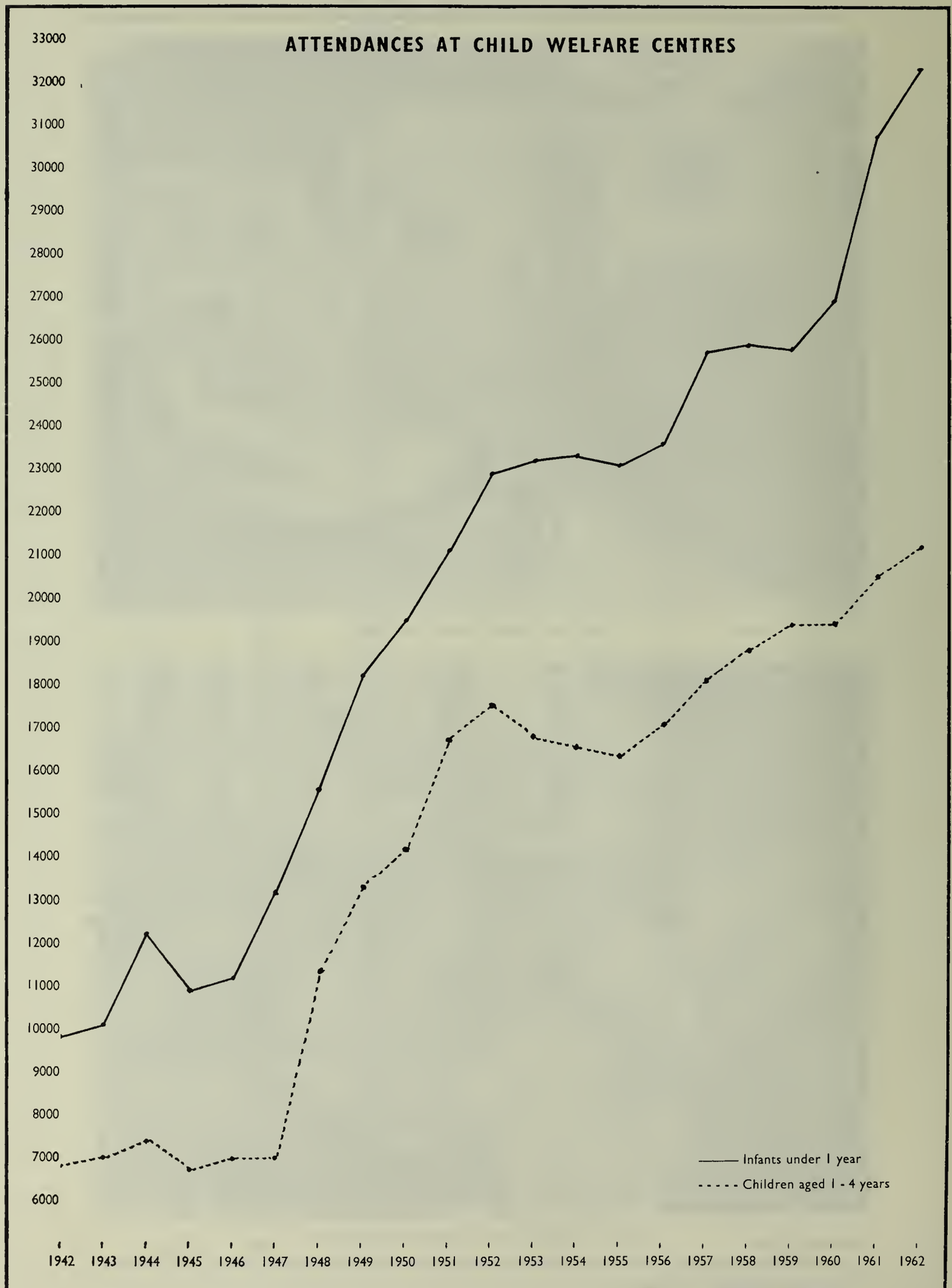
THE NEW MOBILE HEALTH CLINIC

WELLINGBOROUGH PLAY CENTRE IN ACTION

CHILD WELFARE CENTRES

Name of Centre	*Average No. of Children Attending Per Session*	*Sessions held By Doctor*	*By Health Visitor*
Barton Seagrave	44	—	22
Boothville	52	24	—
Boughton	34	11	—
Bozeat	29	11	—
Brackley	51	11	—
Brigstock	36	11	—
Brixworth	21	11	—
Broughton	38	11	—
Burton Latimer	57	11	11
Cold Ashby and Welford	43	11	—
Collyweston	34	11	—
Corby (Health Clinic)	38	48	—
Corby (Beanfield)	56	22	26
Corby (Diagnostic Centre)	50	52	—
Corby (Elizabeth Street)	56	48	—
Daventry	44	23	—
Deanshanger	51	10	—
Desborough	63	11	10
Doddington, Great (*opened June*)	24	6	—
Duston (Congregational Church)	68	22	—
Duston (Rifle Butt) (*opened September*)	83	7	—
Earls Barton	32	11	11
Finedon	21	11	—
Geddington	35	11	—
Gretton	25	11	—
Hackleton	18	11	—
Hardingstone	39	12	—
Helmdon	38	10	—
Higham Ferrers	50	21	1
Irchester	55	11	11
Irthlingborough (St. Peter's Hall)	47	11	—
Irthlingborough (Palmer Avenue)	31	11	—
Kettering (School Lane)	40	137	2
Kettering (St. John)	27	11	11
Kings Cliffe	9	11	—
Kings Sutton	56	11	—
Kislingbury	57	11	—
Long Buckby	35	10	—
Middleton Cheney	56	10	—
Moulton	42	22	—
Oundle	31	11	—
Potterspury	24	11	—
Raunds	23	11	—
Roade	35	11	—
Rothwell	40	12	11
Rushden	80	48	—
Silverstone	37	11	—
Spratton	23	11	1
Thrapston	12	11	—
Towcester	36	11	—
Weedon	34	11	—
Weldon	27	11	—
Wellingborough (Oxford Street)	62	58	—
Wellingborough (St. Andrew's)	49	23	—
West Haddon	45	11	—
Weston Favell	46	23	22
Wollaston	31	11	11
Woodford	24	11	1
Woodford Halse	28	11	—
Yardley Hastings	54	11	—
Mobile Clinic	7*	59†	—

* Average attendance per village
† Villages visited


ATTENDANCES AT CHILD WELFARE CENTRES
33000
32000
31000
30000
29000
28000
27000
26000
25000
24000
23000
22000
21000
20000
19000
18000
17000
16000
15000
14000
13000
12000
11000
10000
9000
8000
7000
6000
1942
1943
1944
1945
1946
1947
1948
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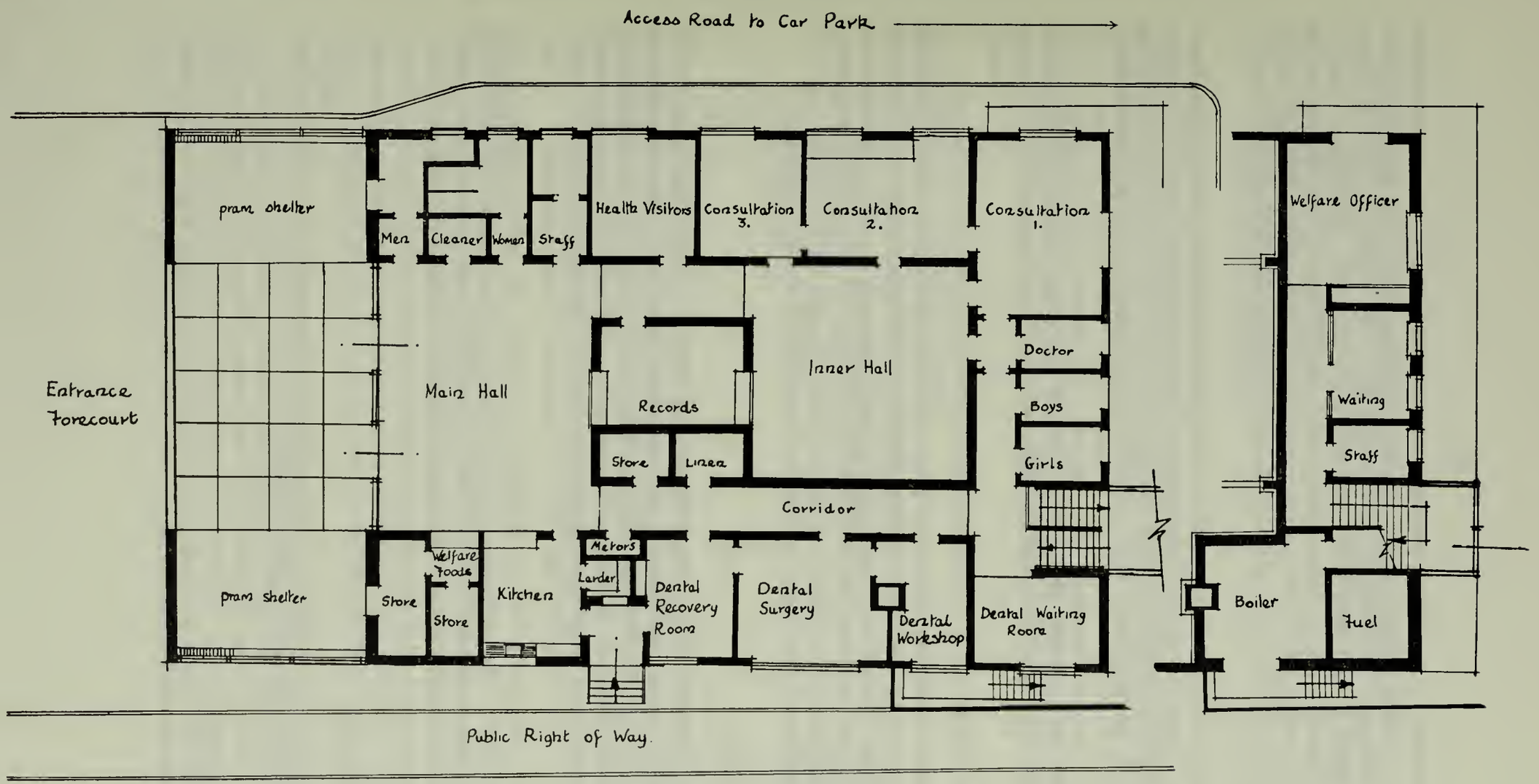
1954
1955
1956
1957
1958
1959
1960
1961
1962
Infants under 1 year
Children aged 1 - 4 years



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RUSHDEN HEALTH CLINIC

A. N. Harris, F.R.I.B.A., County Architect

child welfare centre. A further step towards overcoming this difficulty has been taken by the provision of a suitably equipped mobile caravan and towing vehicle. Its itinerary takes in 34 villages throughout the county in a four weekly cycle, and mothers and children from a further 31 villages are conveyed by the towing vehicle to the clinic. The clinic commenced operation in November, and by the end of the year, 59 sessions had been held, attended by 403 children. The towing vehicle is also used for general transport purposes by the Health Department, and the caravan for school health work, where adequate medical inspection rooms are not available.

The caravan itself consists of a waiting-room, a health visitor's room and a doctor's consulting room. There is hot and cold running water ; fluorescent lighting (which can be supplied either from mains or batteries) ; double glazing ; venetian blinds ; and heating and cooling equipment in the caravan, and there is no doubt about its popularity amongst members of the public.

In addition to the mobile clinic, free bus facilities continued to be supplied to serve 22 centres in rural areas, 228 journeys being made to convey 2,741 mothers and 3,514 children.

(ii) Mothers' Clubs

The formation of mothers' clubs in association with child welfare centres has been a welcome development in recent years. These clubs are socially pleasant and also play an important rôle in giving mothers opportunities of learning more about infant care, as well as wider aspects of mothercraft. So far, such clubs have been established at Corby (New Town) ; Corby (Beanfield) ; Corby (Rockingham Road Estate) ; Daventry ; Kettering and Wellingborough, and it is anticipated that there will be further developments in this direction in the near future.

(iii) Play Centres

The play centre organised by the Wellingborough Mothers' Club and held at the Health Clinic, Oxford Street, started in February, and was featured in the B.B.C. television programme " Midlands at Six " on 7th December. The centre caters for up to twenty-five children during term time from 9.30 to 11.30 on one morning each week. Eighteen mothers are on a rota of helpers, a group of five or six attending each session with an ex-schoolteacher as leader. Activities include music and movement, road drill, story reading, and educational games.

Such play centres are growing up throughout the country, and serve a valuable purpose both by giving mothers the opportunity of a free morning, knowing that their children are well cared for and, from the children's point of view, by acting as a preparation for entry to school. The work of the Wellingborough centre is being watched with interest by the local health visiting staff.

(iv) Child Guidance

This service, which is available to pre-school children where necessary, is dealt with in Part II of " The Health of Northamptonshire in 1962 ".

(v) Speech Therapy

This is likewise considered in Part II.

(vi) Nurseries and Child Minders Regulation Act, 1948

At the end of the year, premises registered under the above Act were :

" Oakroyd " Day Nursery, Finedon Road, Wellingborough	18	children
" Willow Edge ", Barby	9	,,
25 Back Lane, Hardingstone	6	,,
4 East Street, Long Buckby	16	,,
1 Wales Street, Kings Sutton...	5	,,

(vii) Distribution of Welfare Foods

Centres for the distribution of National Dried Milk, cod liver oil, vitamin tablets and orange juice are located wherever there is a demand. There is a full-time centre in the Health Department in Northampton and part-time centres manned by County Council staff at Kettering, Corby, Wellingborough, Rushden and Daventry. The remaining centres are manned by unpaid voluntary helpers who sell the foods from their homes, from shops and at child welfare centres. A debt of gratitude is owed to the voluntary workers for their help in maintaining the centres.

The total number of centres at the end of the year was 157. Of these 151 were voluntary, 32 of which were at child welfare centres.

The number of items distributed during the year was :

National Dried Milk (full cream and half cream)	70,843
Cod liver oil	6,474
Vitamin A and D Tablets	6,481
Orange juice	58,133
Total	141,931

The total number of items distributed during the year was some 41,000 fewer than in 1961. On June 1st of the latter year, charges for vitamin preparations were imposed and this led to a marked fall in demand. On the other hand, by the beginning of 1962, the sales figures had begun to rise again and it is to be hoped that this trend will continue. There was no change in the price of National Dried Milk and the sale of this product has varied remarkably little in recent years.

(viii) Dental Care

Report by the Chief Dental Officer

The picture of the dental health of children under five continues to be a black one, and despite a reduction overall in the manpower available for treating the priority classes, the volume of treatment given has again increased, following the pattern of recent years. The number of children under school age presenting themselves for treatment is now almost double the figure for 1959.

However, a positive outlook must be maintained and encouragement drawn from the fact that attendance by a child at a dental surgery at an early age enables the dental surgeon to gain the confidence of the patient rather more readily than in the case of children attending for treatment for the first time after commencement of school life. If confidence is gained and a satisfactory relationship established between the very young child and the dental surgeon, then that child becomes a good patient for life, able to benefit from the more constructive forms of

treatment available. Further, the contact of parents of very young children with the dental surgeon gives an invaluable opportunity to offer helpful advice on diet and oral hygiene at a time when most benefit can result.

Careless eating habits and an excessive consumption of sweets and sticky foods between meals remain the prime cause of the fantastic amount of dental decay occurring in young children, and parents should realise the importance of training their children to eat beneficial foods at mealtimes and not to succumb to the pernicious habit of nibbling and sucking constantly during the periods between meals. Fluoridation of water supplies would also help by increasing the built-in resistance of teeth to the attack of decay-forming foods, but it must not be allowed to be used by parents as an easy excuse to forget about correct eating habits in their children, for the effects of bad eating habits extend beyond the realms of the child's mouth and the health of his teeth.

TABLE I.

(a) **Numbers provided with dental care :**

	Examined	*Needing Treatment*	*Treated*	*Made Dentally Fit*
Expectant and Nursing Mothers ...	107	167	105	66
Children under five	630	604	487	456

(b) **Forms of dental treatment provided :**

	Extractions	*General Anaesthetics*	*Fillings*	*Scalings and gum treatment*	*Silver Nitrate treatment*	*Radiographs*	*Dentures provided*	
							Complete	*Partial*
Expectant and Nursing Mothers	259	35	134	44	3	8	20	31
Children under five	399	199	228	2	252	1	—	—

(ix) Causes of Death of Children under One Year

Details of such deaths are given in Table II. Prematurity is still the largest problem, accounting for almost half of the infant deaths, with congenital malformations as the next largest cause. Respiratory and other infections nowadays account for few deaths, whereas once upon a time they assumed very large proportions. The control of such infectious diseases has been achieved by improved general standards of health and hygiene, better education of parents, and the availability of effective antibiotics. Effort must now be concentrated on determining the causes of prematurity and of congenital malformations with a view to their prevention. In the case of prematurity, the prospects for infants other than the grossly premature have improved, but there is still scope for further improvement.

TABLE II

Cause of Death	*Age in Weeks*					*Total*
	- 1	- 2	- 3	- 4	4-52	
Prematurity	45	5	—	—	1	51
Congenital Malformations	9	2	—	2	11	24
Respiratory Diseases	—	—	—	—	10	10
Birth Injury	7	—	—	—	—	7
Infections (other than lung and gut) ...	—	—	1	—	3	4
Accidents	—	—	—	—	3	3
Asphyxia and Atelectasis	2	—	—	—	—	2
Enteritis and Diarrhoea	—	—	—	—	1	1
Hæmolytic Disease	1	—	—	—	—	1
Other Causes	2	—	—	—	2	4
Totals	66	7	1	2	31	107

These figures have been prepared from an analysis of death returns received from the local Registrars, and differ slightly from those quoted by the Registrar General. According to the latter there were 32 children who died in the period 29 days to one year. It must be emphasised that this table is based only on the information contained in death certificates, and that practitioners vary in the way in which they complete these. For example, the death of a premature baby who died from asphyxia or from cerebral hæmorrhage might be ascribed to either of the latter without the fact that it was premature being noted. If, however, prematurity was mentioned on the certificate, the death would be classified under this heading.

MIDWIFERY

(Section 23—National Health Service Act, 1946)

(i) Midwifery and Maternity Services

The following table shows the number of cases attended by midwives in the past ten years.

Year	*Doctor not booked*		*Doctor booked*		*Total*
	Doctor present at time of delivery of child	*Doctor not present at time of delivery of child*	*Doctor present at time of delivery of child (either the booked doctor or another)*	*Doctor not present at time of delivery of child*	
1953 ...	15	454	531	769	1769
1954 ...	12	682	445	540	1679
1955 ...	16	555	425	696	1692
1956 ...	42	582	424	621	1669
1957 ...	54	513	408	719	1694
1958 ...	44	598	340	808	1790
1959 ...	74	525	326	896	1820
1960 ...	54	528	298	991	1871
1961 ...	51	436	293	950	1730
1962 ...	12	89	348	1088	1537

The Corby Maternity Unit opened in October, 1961, and accounted for 304 confinements, which would otherwise have been delivered at home, but nevertheless the actual drop in domiciliary births in the County as a whole has only been 193.

(ii) Midwives

The number of midwives who notified their intention to practise in the area during the year was 118. Of these 76 were employed by the Council (including relief midwives), 39 by Hospital Management Committees, and 3 were independent midwives.

(iii) Co-operation with General Practitioners

It is now the accepted rule that where a general practitioner expresses a wish to have the help of a midwife at his antenatal clinic, the midwife is encouraged to give this assistance ; alternatively some general practitioners prefer to meet the midwife at the patient's home for antenatal care.

(iv) Midwife Teachers

Ten midwives in the County have now been approved as midwifery teachers by the Central Midwives Board.

(v) Midwifery Pupils

The county has received approval from the Central Midwives' Board to give the second period of part II midwifery training to 32 pupils per annum, twelve more than in 1961. These pupils come to the district to receive three months' experience in delivering mothers in their own homes, as the final phase of their midwifery training. During this year, arrangements were made with Horton General Hospital, Banbury, to give this experience and training to twelve of their pupils. Had Northamptonshire been unable to co-operate with Horton General Hospital in this way, it is doubtful whether it would have been possible for this midwifery training school to have opened, as it is becoming increasingly difficult to find areas where there are sufficient domiciliary cases to give adequate training. Northamptonshire is fortunate in having midwives capable and willing to undertake this extra responsibility. Such training schemes provide a stimulus to all concerned, and keep the standard of midwifery high. They are also a fruitful source of recruitment. Of 13 pupils trained during the year, three joined the staff.

(vi) Post Graduate Courses

Some of the midwives attended a course in January organised by the Health Education Section. Fourteen midwives attended courses approved by the Central Midwives' Board.

(vii) Relaxation and Mothercraft Classes

The midwives do much work in this field. The classes are appreciated by the expectant mothers, and the degree of co-operation between the midwives and health visitors is particularly close.

(viii) Maternity Outfits

Maternity outfits are available free of charge for all women confined at home, and 1,860 outfits were distributed.

(ix) Medical Aid

Medical aid was requested in 70 cases, and one fee was paid to a medical practitioner whose assistance had been sought, as against 75 notifications and four payments in the previous year.

(x) Sparklet Oxygen Apparatus

All midwives have now been issued with this apparatus.

(xi) Disposable Equipment

Disposable syringes, masks and caps are now used by all midwives.

(xii) Off Duty

Midwives doing full-time midwifery are now receiving off-duty at the rate of two days per week.

(xiii) Student Nurses from Northampton General Hospital, Kettering General Hospital, and St. Crispin Hospital

The midwives have made their contribution towards giving the student nurses from these hospitals an insight into domiciliary midwifery.

(xiv) Cars

All County Council vehicles are provided with safety belts of the diagonal and lap pattern. Staff authorised to use their own cars were also given the opportunity of purchasing safety belts at the contract price obtained by the Health Department, and many of them took advantage of this offer.

The number of cars in use at 31st December by District Nurse/Midwives, Health Visitors, Occupational Therapists and Speech Therapists was :

(a)	Provided by the County Council	70
(b)	Owned privately	77
		147

(xv) Houses

At 31st December, fifteen houses in various districts and three cottages at Wellingborough were owned by the County Council. Nineteen houses were rented by the County Council from District Councils and two from other sources.

During the year, a pair of houses in Daventry and a bungalow at Brackley were purchased.

HOME NURSING

(Section 25—National Health Service Act, 1946)

(i) Staff

At the end of the year 11 whole-time and 10 part-time district nurses, 52 whole-time and 10 part-time district nurse/midwives, and 15 whole-time health visitor/district nurse/midwives were employed.

The establishment at that time was 100, including four members of the supervisory staff. In the light of the 10-year plan, the establishment will be increased in 1963, and efforts were begun towards the end of 1962 to provide nurses other than full-time midwives with one-and-a-half days off duty per week, with complete freedom from duty every other week-end. The provision of adequate relief is of great importance if nurses are to be successfully recruited for the future.

(ii) Cases

The numbers of patients attended are as follows :

Total number of persons nursed	7,041
Number of children under 5 years of age at first visit	384
Number of persons over 65 years of age at first visit	3,581

The number of patients receiving general nursing care has remained fairly constant, but there is reason to believe that in certain areas doctors have been reluctant to bring some patients to the notice of the service because of staff shortage. As the service is built up in strength, it is hoped that practitioners will not hesitate to refer any patient who would stand to benefit from the attention of the district nurse.

At the same time the pattern of the district nurses' work is changing. The emphasis is increasingly on rehabilitation, and fewer patients are bedridden except in the terminal stage of their illness.

(iii) Equipment

In the universal shortage of nurses it is important to ensure that every possible use is made of disposable equipment and other aids to nursing. In the case of sterile equipment, the use of disposable material is also a safety precaution. Sterile syringes and needles are now issued to all nurses and are used for only one injection. Similarly, plastic sheeting and absorbent pads are provided for incontinent patients, and give both comfort to the patient, convenience from the nursing point of view, and a saving in laundry bills for the relatives.

(iv) Non-nursing Visits

During the year, nurses paid 12,747 visits in connection with the home help service and this figure bears little relation to the amount of time actually spent on administrative work, which is not an economical use of a trained nurse. The County Council's decision to set up a comprehensive home help service will, in due course, relieve nurses of visits of this nature, and allow them more time for patients who require their nursing skill.

There were also 7,069 non-nursing visits to the aged. These visits are supervisory in nature and are paid either to patients who have recovered or to old people whose health is precarious and who are likely to become patients. This is preventive medicine, and clearly serves a useful purpose, although in areas adequately covered by voluntary care committees, it is convenient and appropriate that they should undertake the task. It is to be hoped that such care committees will continue to flourish throughout the county, and will take on an increasing amount of this type of visiting.

(v) Training

During the year there has been good co-operation between the County Health Department and both Kettering and Northampton General Hospitals. Domiciliary nurses attend both hospitals for refresher courses, and these are most valuable in bringing nurses up to date with new drugs, treatments and procedures. In exchange it has been a pleasure to receive nurses from Northampton and Kettering General Hospitals and St. Crispin Hospital as part of their studies of the domiciliary medical service. There have also been visitors from the Queen's Institute Training Centre in Leicester.

The usual staff meetings were held, the subjects discussed being detailed in the section dealing with Health Education (p. 34).

(vi) Exhibition

In April, the Oxford Regional Hospital Board held an Exhibition on the theme, " Life in their hands," at Northampton Guildhall. Three sections were furnished and manned by county health visitors, nurses and midwives. The subjects chosen for demonstration were : " Training " ; " Co-operation between midwives and health visitors in the home " ; " Nurses' and midwives' equipment ". All exhibits were successful in attracting a steady stream of visitors, particularly senior school girls, and it is hoped that some of them may eventually think of a career in the domiciliary nursing service.

(vii) Nursing Homes

The homes on the register at the end of the year were :

1. Townsend Nursing Home, Upper Benefield ... ... 7 beds
2. Quarries Nursing Home, Silverstone ... ... 5 beds

(viii) Cars. This subject is dealt with in the Midwifery Section of the report.

(ix) Houses. This subject is dealt with in the Midwifery Section of the report.

HEALTH VISITING

(Section 24—National Health Service Act, 1946)

1. General

The staff at the end of the year consisted of a Deputy Superintendent Nursing Officer, and the equivalent of forty-two full-time health visitors, an increase of six since December, 1961.

It is satisfactory that during 1962, the centenary year for health visiting in Britain, this county was able to appoint six full-time and two part-time health visitors, and that there were no resignations, so that for the first time in many years there were no vacancies waiting to be filled at the end of the year, despite an increase of two in the establishment. This was particularly encouraging, and provided opportunities for extending the work of health visitors, notably in the field of closer co-operation with general practitioners, mental health work, the care of the elderly, and in health education.

Details of visits carried out are as follows :

	1962	1961
Antenatal	1,470	1,182
Infants	48,478	43,597
Children—one to five years	48,408	42,621
Tuberculosis	1,314	1,527
Mentally subnormal	938	849
Infectious diseases and other visits	8,466	5,322
	109,074	95,098

The number of households visited during 1962 was 16,495, an increase of 2,690 on the previous year.

The following attendances were made by health visitors :

Child welfare centres	1,701
Chest clinics	329
Immunisation clinics	207
Birth control clinics	59
Enuresis clinics	14

2. Training

Four full-time health visitors and four generalised workers attended post-certificate courses arranged by the Health Visitors' Association in London, Oxford and Bangor. The Deputy Superintendent Nursing Officer attended the international conference of health visitors at Brighton, arranged jointly by the Scottish and the English Health Visitors' Associations, as a delegate, and six of the health visitors attended the conference independently.

Forty-five health visitors and generalised workers made observation visits to St. Crispin Hospital in small parties during the summer months, and spent four to five hours making ex-

tensive tours of the hospital, with a period of discussion over tea. The health visitors were grateful for this opportunity of increasing their understanding of the care of the mentally ill.

In the early summer of 1962, the health visitors in the Kettering area joined in a morning conference held at School Lane Clinic for the staffs of the training centres. In October, many of the staff took part in an afternoon conference organised by Dr. K. Stewart, with other members of the child guidance team. These were much appreciated, as was the two-day study course organised by the Central Council for Health Education at Knuston Hall on 1st and 2nd March, 1962.

3. Health Education

This has always been an important part of the health visitor's work. A hundred years ago and, indeed, until recent years, this work was carried out entirely by individual advice given to mothers in their own homes, and talks to groups of mothers in child welfare centres. Increasingly, however, invitations are received in the Health Department for health visitors to talk to an expanding number of groups in the community, so that the field is widening. The young people, who are to be the parents of the future, are the most difficult to reach, and this has become a more urgent problem as the age of marriage decreases.

In 1962 the most important advance was the increase in the number of classes which health visitors held in schools, and a similar increase in the parentcraft classes for expectant mothers, and in some cases for fathers, in which health visitors take part. During the year health visitors gave 148 talks to mothers in child welfare centres ; 285 to other organisations such as women's institutes, townswomen's guilds and church groups ; and 907 talks, demonstrations and group discussions to antenatal classes and in schools.

The Mothers' Clubs are another medium for the spread of knowledge in matters pertaining to child rearing and home management. There are six of these clubs in the county, three in Corby, and one each in Kettering, Wellingborough, and Daventry. They are proving very popular and have a growing membership. The health visitors organise and start these clubs with the help of interested mothers, and continue to play an active part by serving on the committees, advising on activities, and suggesting speakers. The Wellingborough Club has organised a play centre for members' children (see page 20).

4. Detection of Phenylketonuria

In February, a pilot scheme was started in Kettering and area for testing all babies for phenylketonuria at two weeks old, and again at four weeks old. This is done by testing urine-soaked napkins when visiting the home. No difficulties have arisen, and no infant has so far been discovered to have this condition. In many cases an extra visit is necessary to get a wet napkin for testing, and health visitors have been surprised at the success of their teaching through the years that wet napkins should be put into a pail of cold water on removal from the baby ! However, mothers are beginning to learn what is wanted, and some of them arrive at the child welfare centre with the required napkin in a plastic bag.

A few mothers have asked for a detailed explanation of the reason for the tests, but most of them have accepted it as evidence of the excellent service they enjoy—not only does the mother have her urine tested when she is expecting her baby, but now even the baby's urine is tested after he arrives ! The scheme is to be extended to the rest of the county during 1963, and it is hoped thereby to be in the best position to achieve the early detection of this rare but preventable cause of mental subnormality.

5. Tuberculosis

In December another pilot scheme was started in the Corby area. The system of home supervision of tuberculous patients has been revised, so that the health visitors will not in most cases continue to visit patients year after year, but will give more intensive supervision during the time they are on chemotherapy, and will also be able to devote more time to patients with particular problems.

The health visitors receive a confidential report from the chest physician on the patient's discharge from hospital. They visit frequently in order to check that all is going well, and maintain constant liaison with the chest physician, who likewise keeps the health visitors informed of the patient's clinical progress. This close supervision will continue for a period of eighteen months to two years, or for longer if necessary, and will entail evening visiting. It is hoped to extend this method of supervision to other areas of the county.

6. Family care

The health visitor's work changes in emphasis with changing conditions—no longer is she concerned almost exclusively with the baby, and with feeding problems and physical health. She is now responsible for the well-being of the family and is interested in their mental and social health. Two case histories may help to exemplify this point :

A mental welfare officer was trying to help a woman in need of psychiatric treatment, who would not keep her appointments at the clinic. This wife and mother of three school children was in arrears with the rent, and had other debts because she was a bad manager, and because she spent the money her husband gave her for rent to buy alcohol. The marital relations had not unnaturally become strained, and the health visitor was asked to visit frequently in order to help this woman to budget, to see that she kept her appointments at the psychiatric clinic, and to give support in every way possible.

Another family who came into the county had two girls aged thirteen and ten, and a boy of six, all of whom appeared unsettled at school. They were brought to the health visitor's notice by the two head teachers concerned, because of their unkempt appearance and erratic attendances at school. The health visitor became a frequent visitor to this home, and the family readily accepted her help and friendship. They were living in a furnished house with a high rent, and were also trying to pay off debts in the town they had left. The father was in a good post, and the mother had a long history of mental ill-health. At first there was some improvement, and the children attended school, and life in the home became more ordered, but soon they began to slip back again, until one day the father telephoned the health visitor and asked her to help him, saying his wife was in a terrible state. After visiting, the health visitor called in the family doctor, who in turn called in a psychiatrist and the mental welfare officer, and the mother was admitted to hospital. The father, after consultation with the health visitor, decided to keep the children at home with him. They were to attend school regularly and have school dinners, and the two younger children were to be in the care of the thirteen-year-old girl between arriving home from school and their father's return from work. The health visitor promised to keep in close touch with them during the time the mother was in hospital, and after her return home, and, by doing so, played a large part in keeping the family together.

7. Liaison with General Practitioners

So far, no formal arrangements have been made for the attachment of health visitors to general practitioners, although this is a development which was foreshadowed in the ten-year

plan and, with increasing staff, should in due course be commenced. Visits to other health departments, which already have health visitors working with group practices, are being arranged so that we can benefit from their experience. When this has been done, it is hoped to initiate an experimental scheme in Northamptonshire, and this should commence in the course of 1964.

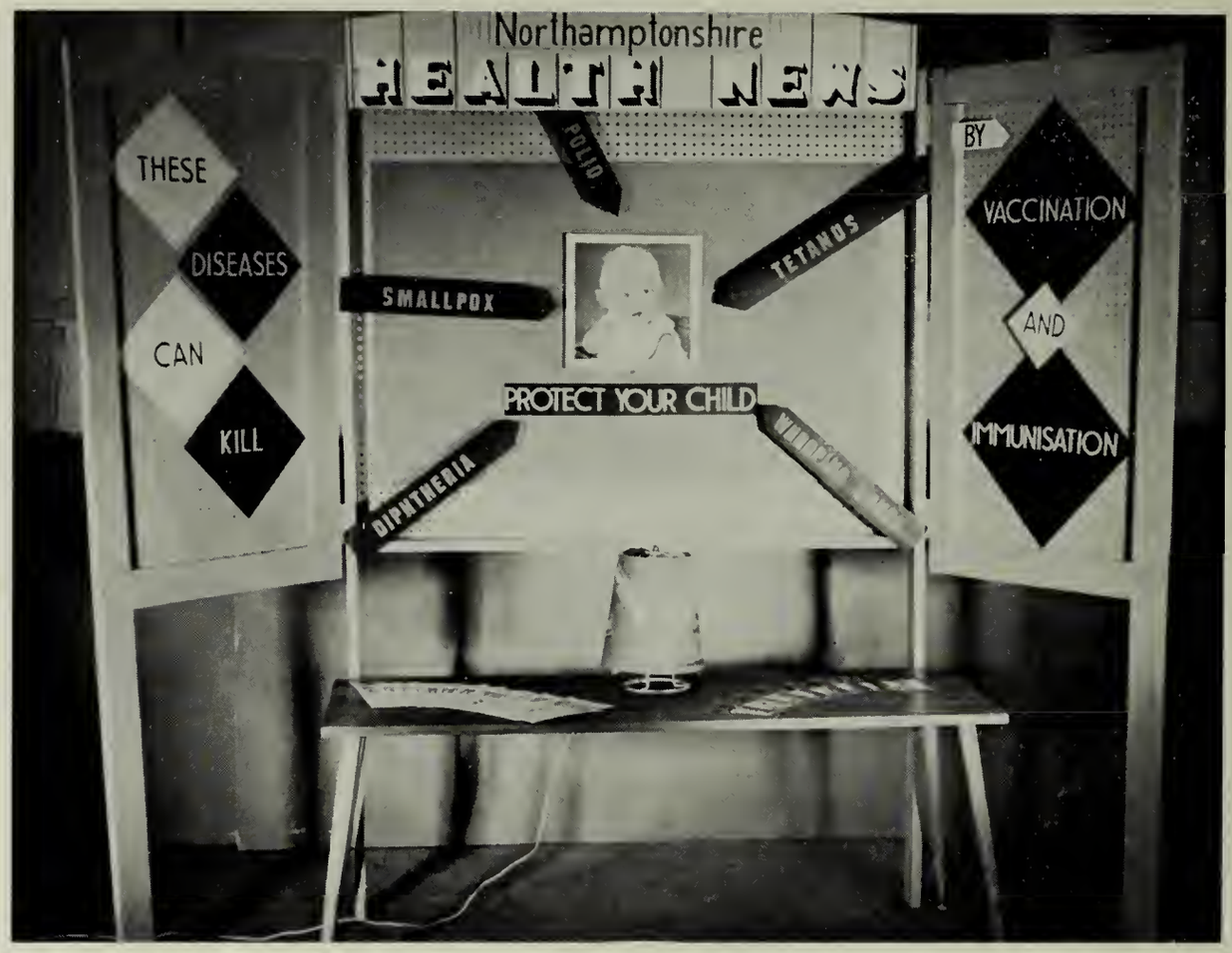
8. Follow-up of Hospital Patients

Increasing links are being forged between health visitors and the hospital service, the example of tuberculosis after-care having already been quoted. The ten-year development plan envisages other specific after-care schemes, notably in the fields of diabetes mellitus and venereal disease. Extensive links already exist between the health visiting service and the paediatric department of Kettering General Hospital, when the health visitors are frequently asked for reports on home conditions, and for help in dealing with social problems. The consultant paediatrician readily gives time to health visitors who want to discuss particular cases with him, and there is an equally close liaison between his social workers and the county health visitors. The paediatric department at Northampton General Hospital also welcomes visits and reports from health visitors.

The health visitors have close links with the Barratt Maternity Home in Northampton, and with the Kettering Maternity Unit. It is hoped to arrange for small parties of health visitors to visit geriatric units in the near future, so that closer co-operation with these departments can be developed. Arrangements have already been made for geriatric patients who need supervision rather than nursing to be referred to health visitors, and this work should increase considerably as more staff becomes available.

CARE OF THE YOUNG . . .

. . . AND OF THE ELDERLY



HEALTH EDUCATION DISPLAYS: IMMUNISATION . . .

. . . AND FIRE HAZARDS

HEALTH EDUCATION

1. Introduction

Health education in its broadest sense has been practised for thousands of years. Thus advice on health is contained in the Bible as well as in earlier books, while a certain amount of health teaching inevitably comes into the advice given to every patient who is being treated for a disease. It is, however, only within the last two or three decades that the subject has gained universal recognition, and more recently still that health education has been realised to be the basis of all aspects of the work of a local authority's health department. The importance of health education is stressed in the Ministry of Health's report on " Health and Welfare : A Development of Community Care " and, before the end of 1963, there should be available a further document prepared by a committee under the chairmanship of Lord Cohen of Birkenhead which has been studying the general question of health education for some years.

The importance of instructing the public in medical matters, both for the promotion of health and for the reduction in disease, has been proved beyond all question. Its success is seen, for example, in the virtual elimination of diphtheria in Britain within the past twenty years. There remain, however, many serious medical problems which can be solved only through prolonged and effective health teaching. This involves changing basic attitudes to such matters as smoking, nutrition and personal relationships, and these changes will not come about suddenly, but rather as the result of steady endeavour on the part of all branches of medicine, coupled with increasing co-operation by all members of the community. The work will be both challenging and, in the long term, rewarding.

2. Organisation

The health education section has now been in existence for almost two years and, during this period, its work has grown from the reorganisation and expansion of relaxation and parentcraft classes, and the issuing of a small number of visual aids, to a large-scale organisation fully occupied in trying to cope with constant requests for better and more effective means of promoting positive health.

Apart from the supply of pamphlets, posters and other equipment provided by national organisations, the health education section produces its own visual aids, made to precise specifications and available to all members of the staff. During the year flannelgraphs were issued for use on 96 occasions, and other material was provided for 69 demonstrations in clinics and classes. The number of film strip projectors and screens was increased and these are now available in seven strategic positions throughout the County in order that they may be regularly used by the staff. Film strips are kept centrally and during the year were issued 598 times, which is an average of about 12 a week. A sound film projector is available and was used at least once a week, the demand growing as staff became aware of the availability of a wide range of films to supplement their health educational efforts. The photographic side of health education was further developed by the purchase of a 35 mm. camera and a 16 mm. cine camera and other equipment. These were bought with money which had accumulated over a period of more than 30 years from the small profit made on the sale of certain welfare foods, and it seemed appropriate that this should be used to provide equipment which would be of service to future generations of the mothers who had originally supplied the money.

3. In-service training

The training of all branches of the staff of the County Health Department is one of the most important functions of health education, as by improving their understanding of the principles and techniques, a large band of field workers can be produced. The courses which were run during the year included the following :

(1) A course for home helps was held at Corby.

(2) Arrangements were made for health visitors to begin to attend the health education section in order to learn more of the latest techniques.

(3) General staff meetings were held on three occasions to consider the introduction of oral poliomyelitis vaccine ; preventive mental health work in children ; and the ten-year development plan, with special reference to its effect on different sections of the department.

(4) Midwives were assisted in starting mothercraft and relaxation classes where these did not already exist.

(5) In March, the Central Council for Health Education arranged a two-day study course on adolescence.

In addition to such in-service training, various groups of staff attended refresher courses elsewhere.

4. External activities

These covered a wide variety of events. The Northamptonshire Branch of the British Red Cross Society invited several members of the staff to take part in a training week-end for their senior members. In April, two stands were allocated to the County Health Department by the Regional Hospital Board in the public exhibition " Life in Their Hands ", which was held in Northampton. Displays were produced depicting the training and work of the health visiting, nursing and midwifery staffs. In the autumn, a marquee was used at the County Show to demonstrate the work of the Training Centres for the mentally handicapped, and there was also a display dealing with health aspects of food.

In October, a one-day course on home safety was organised for representatives of Urban and Rural District Councils and voluntary organisations, and a variety of special displays were made for this.

5. Relaxation and parentcraft classes

These are now established throughout the county and attendances have remained good. A total of 2,542 mothers, of whom 1,879 were having their first babies, attended 1,312 sessions on 8,966 occasions. It might be added that in three areas, fathers have also been invited to attend a special evening at which the film strip on the birth of a baby was shown, and other displays were also arranged. This development was highly successful, with a virtually full attendance at each class.

6. Clinic displays

An attempt was made to rationalise the display of health education material in the County Council's own clinic premises. These tend to gather a collection of posters and notices dealing with different subjects and in varying degrees of decay, so it was decided that, at the main clinics, there should be standard triptych display boards and that demonstrations, on co-ordinated themes, should be prepared centrally and circulated round the clinics. This en-

sures that the material remains fresh and makes a greater impact by being devoted to a single theme. Twelve major displays were prepared and circulated in this way during the year, the themes including "Vaccination and Immunisation"; "Teeth"; "Guard the Fire—Guard the Child"; and "Coughs, Colds and Sneezes".

7. Schools

Health visitors are being increasingly asked to take part in the teaching of schoolchildren, and the health education section assisted by preparing a suggested syllabus for each subject, as well as material for display during the teaching sessions. These were well received by the children, and are of particular value as it is in the school age-group that most can usually be done to inculcate good health habits.

8. Smoking and Health

Much thought was given to the difficult task of making the public aware of the dangers to health caused by smoking. A meeting was organised in July for teachers, and discussion took place on the best method of putting over the facts to children. It was found that the teachers supported the project, and that even those who were themselves smokers mostly agreed that every effort should be made to discourage children from starting the habit. Arrangements were subsequently made for film shows, discussions, posters and pamphlets to be made available to schools. Display material was similarly produced for public use both at County Hall and in health clinics. One of the most important features of teaching children and adults about the subject is to ensure that questions are answered fully and honestly. This can, on occasion, be difficult, as some particular point may call for consultation of a scientific paper on the subject and, in such cases, staff have been encouraged to approach the health education section for information rather than to give a spontaneous answer which might not be entirely accurate.

It is, on the other hand, difficult to put over effective health education on the subject of smoking when it is opposed by rich commercial interests who spend enormous sums of money in persuading the public that smoking is a good idea. It is supremely important that adults should set a good example to children, as it is quite pointless to preach one doctrine and to practise another. Young people are becoming increasingly critical of the double set of standards to which they are too often subjected, being regularly blamed by adults for activities in which the adults themselves freely indulge. Smoking is a subject in which adults have a clear opportunity of influencing the health of children and, through them, of successive generations.

There is also need to pay more attention to the rights of non-smokers and of those who have given up smoking. At present almost the only places in which they can escape from tobacco smoke are in the non-smoking compartments of railway trains, whereas in offices, factories, and in most places of public entertainment, they are subjected to the smoke of others. The tobacco trade makes much play of the fact that a small minority of those who die from lung cancer are described as non-smokers. Such a description is probably inappropriate in this country, as it is almost impossible to escape from having to inhale tobacco smoke.

In conclusion, it should be emphasised that there is no question of blaming the established smoker who acquired the habit before the incontrovertible evidence of its causal relationship to lung cancer and other diseases came to light. The task of health education is to help him to change his habits and thus to save a needless loss of life, which, it should be emphasised, all too commonly occurs amongst men at the height of their careers.

PREVENTION OF ILLNESS, CARE AND AFTERCARE

(Section 28-National Health Service Act, 1946)

1. General

This section of the Act gives wide powers to local health authorities, and many different activities which are mentioned elsewhere in this Report are carried out under these powers. Thus, for example, tuberculosis control work, health education, and the provision of community mental health services, are authorised by Section 28. There are, however, several other services which are involved and which are not covered elsewhere. A brief description of them will therefore be given here.

2. Provision of nursing equipment

A wide variety of nursing equipment is provided for the use of patients in their own homes This ranges from small items such as bedpans and sputum mugs, to larger commodities such as wheelchairs and commodes. Special mention might be made of the twelve hydraulic hoists which are on loan. By means of these hoists, patients can easily be lifted in and out of bed, thus greatly facilitating their nursing and, in some instances, making it possible to nurse at home a patient who would otherwise require long-term or permanent hospital care.

Most of the larger pieces of nursing equipment are kept and lent out centrally by the County Health Department, but district nurses also maintain small loan cupboards of their own. The service is augmented by the medical comforts depots of the Northamptonshire branches of the British Red Cross Society and the St. John Ambulance Brigade, the County Council meeting 90% of the cost of approved replacements.

3. Convalescent Home Treatment

The County Health Department continues to provide convalescent treatment for patients who do not require extensive medical or nursing care. During 1962, twenty-three adults and three children were sent for treatment, mostly on the recommendations of the family doctor, and sometimes at the requests of health visitors, welfare workers or almoners.

Every effort was made to find a home suitable to the patients' disabilities and, if they were unable to travel alone, an escort was usually provided by the British Red Cross Society or St. John Ambulance Brigade. In one case, a young spastic woman was sent to a special hotel at Westcliff-on-Sea which caters specially for spastics. The expenses of an escort, who stayed with the patient at the hotel, were met by the National Spastics Society, to whom I would like to express my appreciation, as without this assistance the hotel would have been unable to accommodate the girl.

4. Chiropody Service

The arrangements for providing a chiropody service for old people are made through voluntary organisations. Under the County Council scheme, such organisations can reclaim 75% of their net expenditure based on the Whitley Council scale safter the patient's contribution of 2/6d. has been deducted.

In practice, however, very few voluntary organisations receive 75% of their expenditure, and some receive as little as 50%, owing to the fact that chiropodists are not prepared to work for the Whitley Council scale of fees. Since the Whitley Council fees for domiciliary treatment and treatment at the chiropodist's premises were increased on April 1st, 1962, the voluntary organisations have received the full 75% of their expenditure for these types of patients, as the chiropodists appear to be in agreement with the revised rates. Unfortunately, the sessional fee of £1/17/6 on which the major part of the claims are based, was not amended on April 1st and consequently, for patients treated on a sessional basis, the organisations have to bear the difference between the amount the chiropodists actually charge and the Whitley Council fee, in addition to the 25% of the cost, which they would normally have to pay under the conditions of the grant.

One of the conditions of the payment of grants to voluntary organisations is that all old people in the neighbourhood should be eligible for treatment under the scheme, whether or not they are members of the organisation. Several organisations, especially in urban areas, are finding that, if too many non-members receive treatment, the cost is more than they can afford. To reduce the drain on their funds, some organisations are charging the standard contribution of 2/6d. per treatment for members, but for non-members are charging an amount which will also cover the 25% of the cost which they would normally have to pay from their own funds.

Two-hundred-and-eight claims for grants were received from sixty-two organisations. The number of treatments given was 10,645, and the total amount of grants paid was £2,294.

5. Occupational Therapy

(i) Staff

During the summer Miss J. C. Moore left to get married, and was replaced by Miss C. Mulhearn, who came from Liverpool, where she has had previous experience in the domiciliary field, with special relation to rehabilitation.

(ii) Mental Subnormality

The only two children who do not attend the training centres are still being visited at home, and receiving instruction. Sixteen older subnormal males and females were also being visited at the end of the year.

Liaison has been maintained with all training centres, especially the Kettering Adult Centre, which has undertaken work for the occupational therapists. In some cases, work for one project has been done jointly by trainees at the centre and homebound patients.

(iii) Mental Illness

At the end of the year, 28 patients in this category were being visited regularly. The following are examples of the type of help given by the occupational therapists.

(a) A woman, aged 29, with a long-standing anxiety neurosis with depressive features, was discharged from the Pendered Ward of St. Crispin Hospital, and the consultant psychiatrist asked that she should be visited by an occupational therapist, as she would be alone at home while her children were at school. She had been interested in dressmaking in the hospital but, at first, was very reluctant to make any progress with an article without the therapist being present. Eventually she was helped to the stage where she would complete a garment unaided, and she has also found a part-time job, so her time is now fully occupied.

(b) A man, aged 40, who had had two admissions to St. Crispin Hospital, suffered from periodic depression. He had been doing heel assembly work at home, but the supply from the factory was very spasmodic. He helped to look after some chickens, but was most reluctant to get a job. Since an occupational therapy class has been started in his town, he has been a regular attender, and is showing signs of gradual improvement. His returning interest is demonstrated by his willingness to assist the therapist in making tea, clearing up, and looking after other patients.

(iv) Other Patients

This group includes patients suffering from tuberculosis and from a variety of other physical illnesses or injuries.

A man, aged 45, sustained severe fractures of both legs following a motor cycle accident. His wife was severely injured at the same time and is confined to a wheelchair. They both attend the St. Giles' Club for the disabled, and the husband has been very active at home. Recently he has attended an Industrial Rehabilitation Unit, and it is hoped that further training and assistance will eventually prepare him for a suitable occupation.

(v) Red Cross Clubs for the Disabled

The St. Giles' Club at Kettering has been flourishing for nearly two years with over 70 members and regular attendances of approximately 50. Apart from occupational therapy, there has been an active social programme, including organised outings and a Christmas party.

In October, a similar club was started in Corby, being held in the Beanfield Bungalow every other week. There were 13 patients present at the inauguration, and this number has now more than doubled.

(vi) Occupational Classes

In May, an occupational therapy class was started in Desborough. This provides a better service for patients as well as considerably reducing the therapist's travelling time and allowing her to treat more patients than was previously possible. By the end of the year, 14 patients were attending, and the class appears to have made a successful beginning. A variety of activities are undertaken, and it has been possible to introduce group projects involving several of the patients working together, such as the manufacture of pot scourers.

A class at Thrapston was started in July, and has been fortunate in having the help of Thrapston Care Committee for transport and many other needs. This committee provided a special stall for the class at their bazaar, and this proved most successful in the sale of articles that had been made by the patients.

HOME HELP SERVICE

(Section 29—National Health Service Act, 1946)

Since the inception of the National Health Service in 1948 the County Council has not employed full-time home helps. Instead, the policy has been to make use of part-time employees who are found by district nurses and health visitors as and when necessary. In the more populace parts of the county, some of these home helps are regularly employed, whereas in rural districts, employment is of a casual nature.

1. Statistics

Type of Case	*No. of Cases*	*Percentage of total*
1. Maternity (including antenatal and postnatal)	33	2.49
2. Tuberculosis...	10	0.76
3. Chronic Sickness (including aged and infirm)	1,104	83.25
4. Acute Illness	170	12.82
5. Others	9	0.68
Total	1,326	100.00

From the table it will be seen that by far the largest group of patients requiring the services of home helps is the elderly and infirm. The next is those in whom some acute illness has temporarily necessitated assistance in the home, and the third group in size consists of women who require assistance in connection with their confinement. The remaining categories account for very small numbers of home helps.

Unlike most of the services provided by the County Health Department, home helps must be paid for by the patients, whose ability to pay is assessed in accordance with a scale. In the case of blind people there is complete exemption, whilst those who are receiving National Assistance are charged only 5/- per week, which can be re-claimed from the National Assistance Board. In addition, the Maternity, Nursing and Care Sub-Committee is always prepared to waive the charges in particular cases of need.

The cost of the service per 1,000 population was £140/13/- during the financial year ended 31st March, 1962, the cost per case being £40/5/-. It will thus be seen that this is not an inexpensive service, but it must be remembered that, through the provision of home helps, it is often possible to avoid the greater expense and inconvenience of admission to hospital. In the case of the elderly it can often make the crucial difference between being able to remain independent and having to seek residential care.

2. Administration

At present there is a Home Help Organiser, Miss E. Newell, who covers certain of the urban areas in the east of the county, working in association with members of the nursing staff. As part of the County Council's proposals under the 10-year plan for the development of the county's health services, the whole county will be administered by a Home Help Organiser, who will have Assistant Organisers to look after each area. This will relieve the nursing staff of a substantial

amount of administrative and clerical work which they must at present carry out in connection with the provision of home helps.

Miss Newell has submitted the following report on her work in the Kettering, Wellingborough, Rushden, Finedon and Irthlingborough areas during the year.

" Statistics

There were 86 new cases provided with home helps. Of these, 40 were in Kettering, 25 in Wellingborough, 12 in Rushden, and 9 in the Finedon and Irthlingborough area.

During the year I paid 2,410 visits, which includes 1,260 calls on home helps, patients' relatives, and in answer to general enquiries.

At 31st December, 1962, the number of current cases was :

Kettering area	142
Wellingborough area	55
Rushden area	30
Finedon and Irthlingborough area ...	28
TOTAL	255

Allocation of hours in respect of these 255 cases was as follows :

177 cases : up to 4 hours weekly ;
51 cases : 5 to 7 hours weekly ;
23 cases : 8 to 10 hours weekly ;
4 cases : 11 to 14 hours weekly.

Help is being provided in 160 instances where patients live alone. (Males 42 : females 118.)

Home Helps

During the course of the year, 25 new home helps were engaged to replace those giving up on account of changed domestic circumstances. Before being employed, a new home help is always visited in her own home.

The number of home helps employed at the end of the year was 160. Some of these women have now been doing their job for three, four, and even five years. To be able to retain the same band of workers has a considerable advantage, as the home help, by reason of her long service, is more understanding and sympathetic towards her patient's needs and home conditions. Her experience promotes a higher standard of efficiency.

Training Courses

Corby was the area selected for the third annual training course for home helps. The scheme, first introduced in 1960, has so far covered Wellingborough, Rushden, and the Kettering areas.

Instruction at Corby followed closely the programme used at the two previous courses, and included demonstrations in home nursing and the use of hoists ; lectures on problem families ; and the work of the home help in mental illness and in home confinements.

Use was again made of visual aids, and an illustrated talk on diet and health education, given by the Health Education Organiser, proved very popular among the helps, as these subjects are important items in their work.

During a discussion period on the last afternoon of the course, questions were put to a panel of staff members by the home helps. This was an interesting and lively session, resolving some of the problems encountered by the home helps in the course of their duties.

Patients

Applications for domestic assistance in sickness and infirmity are often received from persons in good financial circumstances who themselves are unable to find domestic help. In these cases, and where the need for assistance in the home is medically justified, names and addresses of women known to be available for work are supplied to the applicant to make their own arrangements. This procedure saves clerical work, and only a minimum of supervision is necessary.

A close link is maintained with all voluntary and social services. Personal contact concerning patients is often made with staff of the Welfare Department, hospital almoners, local medical practitioners, and also officers of the National Assistance Board.

Elderly and incapacitated patients, living alone, and having no immediate relatives are, on occasions, visited in hospital prior to their discharge to discuss details of their domestic circumstances and the need for provision of home help. The service can thus be made available to them immediately on their return home.

The regard patients have for their home helps was conveyed to me one day while making a routine visit to a frail, housebound lady of about 80 years of age. In the course of our chat together I asked about her home help, and about whether they got along well together. She was thoughtful for a second or two, then replied, ' Oh, I call *her* my friend '—officially a home help, but a friend in need is also the reaction of most patients."

MENTAL HEALTH

1. INTRODUCTION

Now that two full years' experience has been gained of the operation of the Mental Health Act, 1959, it is appropriate to consider briefly its influence on the work of the Mental Health Section of the County Health Department.

It must be remembered that the 1959 Act contained in effect little that was new, that was not already accepted in theory or in practice as far as this county is concerned. It was, however, of great significance in the mental health field. The Act dealt mainly with the method of entry and discharge of patients in psychiatric hospitals, and with the development of community care. Its importance lies not so much in marking the beginning of a new era in the care of the mentally disordered as in placing a final seal on the outmoded judicial and custodial approach which had persisted since the end of the last century. It paved the way for the rise of a planned yet flexible pattern of care based on the positive, more optimistic outlook which resulted from recent progress in psychiatric skills. Of perhaps even greater importance, it gave legal recognition to the long-held medical view that mental disorder should be considered and accepted as an illness to be dealt with in the same way as other illnesses.

The emphasis of the work of the mental welfare officer has changed considerably in consequence of the Act. His chief function is no longer to arrange admissions, but to prevent mental breakdown by early effective social work, and to care for the ex-patient discharged from hospital. The staff have already adjusted well to the challenges in their altered duties. The need for adequate training in social work is fully accepted, and considerable difficulties have been overcome to allow as many as possible to attend training courses. Their links with the hospital staff, already very close, have if anything improved further, with a growing sense of interdependence and partnership in their closely related work. As a result, a sense of continuity of care is arising for the mentally disordered, with the mental welfare officers playing a major part in bridging the gap between hospital and community.

The first two years of the "new look" mental health services have been exciting, but much remains to be done. The developments outlined in the ten year plan for the county will, when fully realised, create the necessary framework within which a full community service may be provided.

2. ADMINISTRATION

(a) Committee

There was only one change as regards the committee responsible for the Service, and that was a change of name. To bring it into line with the names of other Sub-Committees of the Health Committee, the name was changed from Mental Health Services Sub-Committee to the Mental Health Sub-Committee. The membership remains as outlined in last year's report.

(b) Co-ordination with other Health Services

The close liaison with the hospital services continues. The County Medical Officer of Health is a member of Northampton and District, and St. Crispin Hospital Management Committees and of the Board of Governors of the United Oxford Hospitals. Throughout the year,

much guidance and help was obtained from the Physician Superintendent and his consultant psychiatrist colleagues of St. Crispin Hospital. Student nurses from the hospital accompanied mental welfare officers on domiciliary visits, and saw for themselves the social work so necessary in the after care of the mentally disordered.

The general practitioners throughout the county continue to make good use of the mental welfare staff, and there are regular requests for assistance. If community care is to succeed, a close partnership between the family doctor and local health authority is essential.

3. STAFF

(a) Medical

In July, Dr. J. V. Dyer left to take up a new appointment as Divisional Medical Officer with Lancashire County Council. In the short time he held the post of Senior Assistant Medical Officer, he created excellent relations with all the training centres and with the special schools in the county. In August, Dr. H. R. Simpson took over as Senior Assistant, and has undertaken the day-to-day administration of the mental health section.

(b) Mental Welfare Officer

A new mental welfare officer, Miss Olive Towning, commenced duties in September. Holding the Diploma in Social Studies, and with experience in this field of work in another authority, Miss Towning has worked closely with the specialist staff at St. Crispin Hospital. There are now seven mental welfare officers in the field.

(c) Staff training

Two of the mental welfare officers are attending a part-time course at the Lanchester College of Technology, Coventry, leading to the external Diploma in Social Science of London University.

Mrs. M. B. Redley, Supervisor of the Northampton Junior Training Centre, gained the Diploma for Teachers of the Mentally Handicapped, bringing the number of trained supervisors to five. In October, Mrs. E. E. Cocker, of the Corby Centre, commenced the Course.

4. CARE OF THE MENTALLY ILL

The figures in Table III indicate the work of the Department in the care of the mentally ill. It is still too early to detect trends in the work of the mental welfare officers consequent upon the Mental Health Act, 1959, but in 1962 the total number of cases dealt with increased by almost 100.

A new development during the year was the start of a social workers' out-patient clinic at St. Mary's Hospital, Kettering, in May. Under the consultant psychiatrist, Dr. J. J. H. Lowe, and with a mental welfare officer in attendance, 213 interviews were given up to the end of the year.

TABLE III

	1962	1961
1. Number of patients notified to County Health Department :		
(a) Subnormal and severely subnormal	96	137
(b) Mentally ill and psychopathic	821	725
	917	862
2. Action Taken :		
Domiciliary supervision or care	367	348
Admitted to hospital :		
(a) informally	117	123
(b) under Section 25 (observation)	182	173
(c) under Section 26 (treatment)	20	58
(d) under Section 29 (emergency)	28	9
(e) under section 40 (detention whilst in hospital)	1	—
(f) under Section 41 (transfer)	1	—
(g) under Section 60 (Court Order)	1	2
(h) under Section 71 (Hospital Order)	—	1
(i) under Section 72 (transfer)	1	—
(j) short-term care	19	20
Action pending or no action under Mental Health Act	180	128
	917	862
3. Patients on leave from hospital	15	11
Patients discharged from hospital care	677	644
Patients discharged from supervision or care	171	155
Died or removed from area	122	151
4. Total number of admissions (including those not dealt with by County Health Department) :		
(a) for treatment	23	60
(b) for observation	211	182
(c) informally	586	569
	820	811

5. CARE OF THE MENTALLY SUBNORMAL

(a) Cases

Ninety-six new patients were referred to the Department and, of these, 56 were considered for supervision.

Forty-five names were removed from the list of those under care, 24 because they no longer required supervision, 8 died, and 13 left the area. The total number receiving help remained at approximately 500. These were visited by mental welfare officers where particular difficulties had to be solved, and by health visitors who paid 938 routine quarterly calls.

(b) Hospital Care

Thirty-five patients were admitted to psychiatric hospitals for the subnormal, 31 entering informally, two under treatment order, and two by order of Court. Nineteen of these patients were admitted to hospital for temporary periods, usually to provide a break for their parents.

At the end of the year, the waiting list for admission to hospital :

	Males		*Females*		*Total*
	Under 16	*Over* 16	*Under* 16	*Over* 16	
Urgent ...	1	—	1	2	4
Non-urgent ...	7	5	2	3	17
Totals : ...	8	5	3	5	21

(c) Voluntary Bodies

The reports of the individual centres contain several references to the generosity and help received from local branches of the National Society for Mentally Handicapped Children. Their continued work in this field gives much encouragement to the staff, as well as to the parents of the children.

(d) Training Centres

The total number attending the Training Centres continues to rise, and in December 1962 there were 203 receiving training (see Table IV). The accommodation at the Centres is quite inadequate for such numbers and the staff were hard pressed to maintain high standards. It is all the more pleasing, therefore, to report that the year's work in all centres was extremely satisfactory.

The most exciting development during the year was the start of work on the county's first purpose-built training centres and hostel, at Kettering. When completed in 1963, the Kettering buildings will give staff the opportunity for effective work in suitable and attractive premises.

During the year, progress was made on the plans for the other new centres at Corby and Northampton. Some delay was, unfortunately, caused by a revision of the plans, suggested by the Ministry of Health. Although based on plans already approved by the Ministry for Kettering, the new centres are now to be of four-class size, suitable for up to 60 children. The revised plans meant that extra land was required at all sites, and by the end of 1962 this has been obtained. There was still difficulty over the acquisition of the site at Wellingborough, and the delay already caused has meant rephasing the programme so that Wellingborough centre and children's hostel will not now be completed until 1964/65.

TABLE IV

Numbers attending Training Centres

		Under 16	*Over* 16	*Total*
Kettering Adult Training Centre :	Males	1	24	25
Kettering Senior and Junior Training Centres :	Males	16	—	16
	Females	13	17	30
		29	17	46

		Under 16	*Over* 16	*Total*
Wellingborough Junior Training Centre :	Males	19	—	19
	Females	14	5	19
		33	5	38
Corby Junior Training Centre :	Males	22	—	22
	Females	15	1	16
		37	1	38
Northampton Junior Training Centre :	Males	24	2	26
	Females :	14	6	20
		38	8	46
Banbury Training Centre :	Males	4	3	7
	Females	1	1	2
		5	4	9
Rugby Training Centre :	Female	1	—	1
Total under Training :		144	59	203

Junior Centres

The children continue to be taught by the methods advocated by the National Association for Mental Health, with favourable results. Emphasis is placed both on free play and free activity, as well as on formal teaching ; and many visits of observation were made by the seniors to places of interest. Each centre held an open day when parents and friends were invited to see the children at work and to discuss progress with members of the staff. Throughout the year, various groups and parties from voluntary societies visited the centres, and it was found once again that the visits promoted interest in the children's welfare and encouraged a more enlightened attitude towards the mentally handicapped.

For the first time, a display was arranged at the County Show held at Overstone. A detailed exhibition outlined the approach and teaching methods of the centres, and many samples of the work of the children were shown. It was felt that the effort involved was well worthwhile, and it is hoped that this will become an annual event.

The centres continue to receive most generous support in the form of gifts from many local societies, all of which are gratefully acknowledged. Some of the centres were able to take the children on holiday or on social outings through arrangements made by local branches of the National Society for Mentally Handicapped Children.

Kettering Adult Training Centre

There has been another good year of progress and increased productivity. The trainees are becoming more adaptable to the various jobs which are undertaken and a good standard of work has been achieved. Much of the woodwork and printing has been for the County Council,

but an increasing number of firms are placing orders. Gardening continues to be successful and is greatly enjoyed by the trainees.

During the year three trainees left to get jobs in industry and six new trainees joined the centre. In addition to the wide basic training provided at the centre, visits to local factories were arranged. These were of value to the trainees, as they showed the similarity of their own work to some of that done in industry.

Over 100 people visited the centre and many talks, illustrated by slides, have been given by the staff to the public. Further publicity was obtained by displaying samples of the work of the trainees at Rushden and Wellingborough carnivals, at the County Show, and in a shop window in Kettering.

AMBULANCE SERVICE

(Section 27—National Health Service Act, 1946)

1. HISTORY

When the County Council assumed responsibility for the ambulance service in 1948, it was decided to delegate the service to those existing voluntary organisations which had previously provided ambulances for the conveyance of emergency stretcher cases to hospital at the request of local doctors, and for attending accidents occurring within their localities. Arrangements were also made for the Hospital Car Service of the Women's Voluntary Services, and for local taxis to supplement the ambulance fleet by carrying sitting cases.

By 1954, however, the demands on the service had increased to a stage where the out-patient load on organisations operating on a voluntary basis was causing difficulties in providing ambulances for accidents and emergencies. Following a survey carried out on the "dead" mileage, i.e. when vehicles were travelling empty whereas they might have been used for other work, the Council decided to introduce radio-telephony operating from a central control. Previously each of the voluntary organisations had worked in isolation in its own area, and to superimpose a central radio control on such a system would have created tremendous problems. Accordingly it was decided to provide and operate a direct service in the main centres of population, namely, Corby, Kettering, Northampton, Rushden and Wellingborough ; and to provide radio-telephony for the larger agency services at Brackley, Daventry, Oundle and Towcester.

By 1960 the revised arrangements had become fully operative. Purpose-built stations had been provided at Corby, Northampton, Rushden and Wellingborough, and an old fire station had been taken over at Kettering. Meantime, in 1957, the Oundle Division of the St. John Ambulance Brigade were unable to continue their agency service, and this was taken over by the Council. The work of the agency service at Islip increased, and radio-telephony was supplied for their ambulance. In 1959 the Council provided a dual-purpose vehicle with driver to supplement the voluntary service in the Brackley area, the vehicle undertaking the non-emergency work and leaving all else to the voluntary agency. By 1961 it was found that the work done by certain of the smaller voluntary organisations could be carried out by neighbouring County Council ambulance stations, and agency arrangements at Burton Latimer, Finedon and Higham Ferrers were consequently terminated.

2. PRESENT ARRANGEMENTS

The distribution of ambulances and staff is as follows :

(a) **Central Control Staff**

County Ambulance Officer
2 Control Officers
3 Assistant Controllers
1 Telephonist/Clerk

(b) **County Council Service**

Station	*Vehicles*	*Staff*	
		Station Officers	Drivers
Corby	4	1	6
Kettering ...	5	1	7
Northampton ...	4	1	6
Oundle	2	—	2
Rushden ...	3	1	3
Wellingborough	4	1	5
Brackley ...	1	—	1
Reserve vehicles	2	—	—
	25	5	30

(c) **Agency services** (equipped with radio-telephony)

Station	*Vehicles*	*Staff*
Brackley ...	1	Part-time and volunteers
Daventry ...	3	4 full-time drivers and volunteers
Towcester ...	2	3 full-time drivers
Islip	1	Part-time and volunteers
	7	

(d) **Agency services** (no radio-telephony)

Station	*Vehicles*	*Staff*
Desborough ...	1	Volunteers
Irthlingborough	1	Volunteers
Raunds	1	Volunteers
Rothwell ...	1	Volunteers
Weldon	1	Volunteers
	5	

These services are supplemented by the Hospital Car Service of the W.V.S. and by the hiring of taxis in the Brackley and Daventry areas.

3. WORK UNDERTAKEN IN 1962

	No. of patients carried			*Mileage*
	Accidents or emergency	*Others*	*Total*	
County Council Service	6,413	68,647	75,060	556,551
Agency services equipped with radio-telephony	1,501	18,456	19,957	168,571
Other agency services	284	294	578	8,695
Supplementary services :				
Hospital Car Service	9	3,302	3,311	59,249
Taxis	85	2,081	2,166	28,630
Total	8,292	92,780	101,072	821,696

Rail journeys—227 patients were conveyed by rail involving a mileage of 17,284.

4. REVIEW OF THE SERVICE

Although there was a slight fall in the numbers of patients carried and in the total mileage compared with the previous year (see graph) there is no reason to suppose that demands will continue to fall, bearing in mind the increasing county population, the trend towards treatment as out-patients, the tendency to earlier discharge from hospitals, the development of day-hospital facilities, and the rising number of road accidents.

The establishment of vehicles is barely able to cope with existing demands and patients frequently have to be taken on long and circuitous journeys in order to stretch the existing vehicles as far as possible by ensuring that each is fully laden throughout most of its journey.

As far as staffing is concerned, there is need for an increase to enable stretcher cases to be dealt with, as far as possible, by a full ambulance crew. There was an increase in 1960, but the subsequent rise in demand and reduction of working hours resulted in the extra men soon being absorbed in routine driving duties. Night arrangements also require review, as the present system of covering the entire county by men who are "on call" at home is inadequate, and leads to delay in dispatching ambulances. Consideration must also be given to the provision of in-service training for ambulance staff in order that the highest possible level of efficiency may be achieved. This should include hospital training, in accordance with the recommendations of the Accident and Emergency Services Sub-Committee of one of the Minister of Health's Standing Advisory Committees.

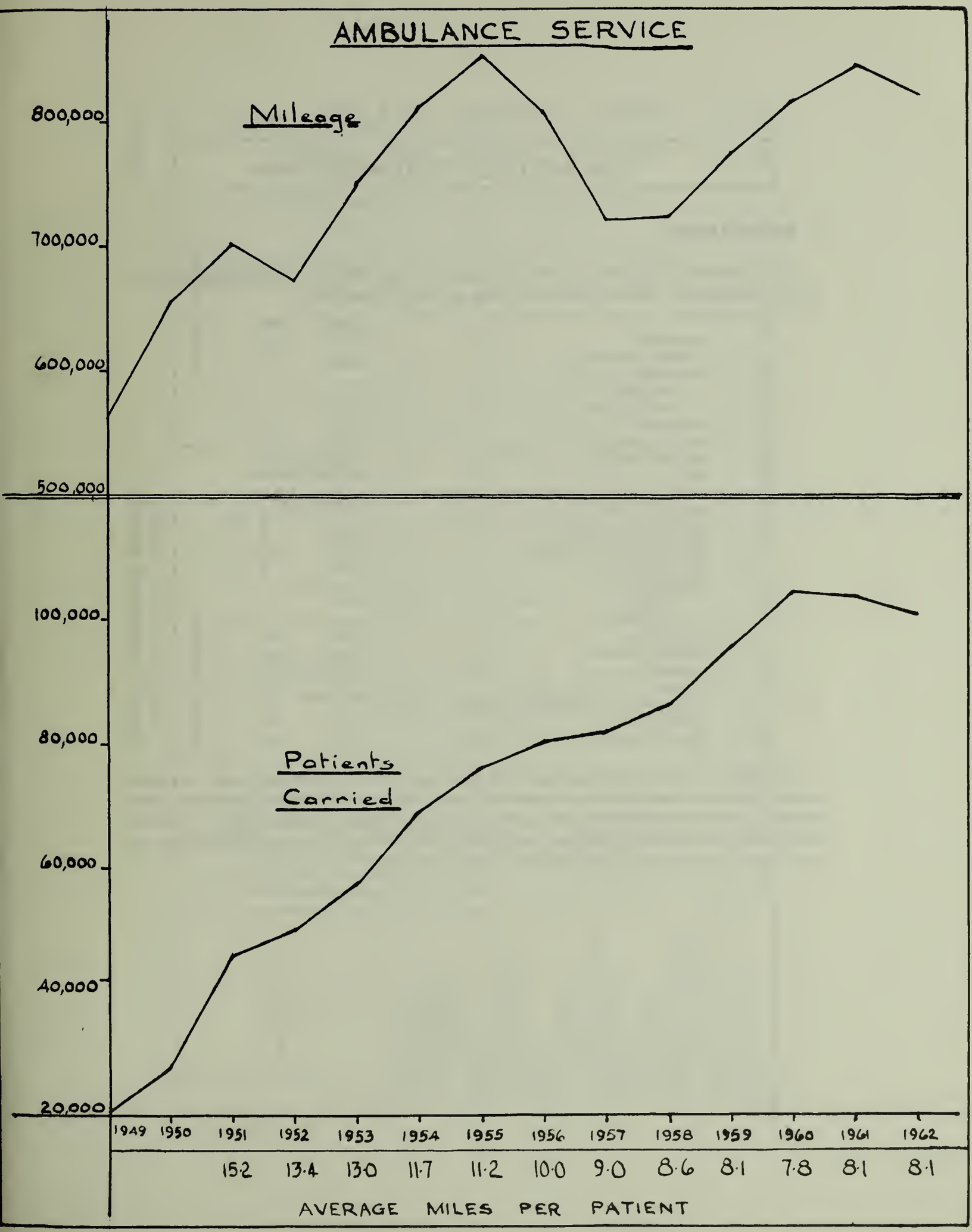
5. FUTURE DEVELOPMENTS

The County Council have approved in principle an expansion of the ambulance service as set out in the ten-year plan for the development of its health services. The establishment will be increased over the next five years to nine stations, forty-two vehicles and eighty-one operational staff, and this will involve the absorption of the Brackley, Daventry and Towcester agency services within the directly provided service. The Council have also approved the appointment of a Deputy County Ambulance Officer during 1963/64 to assist the County Ambulance Officer and to take charge during the latter's absence.

The policy for the replacement of existing vehicles is that all conventional ambulances will be on 20/25 cwt. chassis with Pneuride suspension, which provides variable springing and a comfortable ride irrespective of the number of patients carried. The sitting-case vehicles will also be on the 20/25 cwt. chassis fitted with ten-seater bodies—all seats facing forward.

New ambulance stations are to be provided at Brackley, Daventry, Oundle, Towcester and Kettering, and with an increase in the number of vehicles at all stations, additional accommodation will be needed at Corby, Northampton and Wellingborough.

With these developments it is to be anticipated that the ambulance service in Northamptonshire will be in a position to meet the foreseeable demands of the period covered by the ten-year plan.


AMBULANCE SERVICE
Mileage
800,000
700,000
600,000
500,000
Patients Carried
100,000
80,000
60,000
40,000
20,000
1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962
15·2 13·4 13·0 11·7 11·2 10·0 9·0 8·6 8·1 7·8 8·1 8·1
AVERAGE MILES PER PATIENT

INFECTIOUS DISEASES

1. NOTIFICATIONS

The following are the diseases notified during the year, with the corresponding figures for 1961 for comparison. Further details are given in Table V, page 53.

	1962	1961
Diphtheria	—	—
Dysentery (Bacillary)	72	32
Encephalitis		
Infectious	—	1
Post Infectious	—	1
Erysipelas	10	19
Food Poisoning	20	12
Infective Hepatitis	88	—
Malaria	—	—
Measles	2,033	5,304
Meningococcal Infection	3	5
Ophthalmia Neonatorum	1	2
Other forms of Tuberculosis	—	18
Paratyphoid Fever	—	2
Poliomyelitis		
Paralytic	—	1
Non-Paralytic	—	—
Pneumonia	106	161
Puerperal Pyrexia	6	14
Scarlet Fever	161	187
Smallpox	—	—
Tuberculosis of the Respiratory System	—	78
Typhoid Fever	—	1
Whooping Cough	43	149

Comments : The outstanding feature of these figures is the satisfactory state as regards diseases for which immunisation is available. Thus there was no smallpox, diphtheria (sixth successive year) or poliomyelitis, and only 43 cases of whooping cough occurred. Infective hepatitis became notifiable throughout most of the county during the year and it will be interesting to study the incidence of this infection in successive years.

CASES OF INFECTIOUS DISEASES

TABLE V.

(Final numbers after correction.)

DISEASES	URBAN DISTRICTS														RURAL DISTRICTS									Totals for Administrative County
	Brackley (Borough)	Daventry (Borough)	Higham Ferrers (Boro')	Kettering (Borough)	Burton Latimer	Corby	Desborough	Irthlingborough	Oundle	Raunds	Rothwell	Rushden	Wellingborough	Totals for Combined Urban Districts	Brackley	Brixworth	Daventry	Kettering	Northampton	Oundle and Thrapston	Towcester	Wellingborough	Totals for Combined Rural Districts	
Scarlet Fever	—	20	2	12	3	8	10	—	—	32	—	3	9	**99**	7	4	10	2	26	—	4	9	**62**	**161**
Whooping Cough... ...	—	1	—	5	—	1	—	—	—	—	—	—	—	**7**	—	8	4	1	18	2	—	3	**36**	**43**
Acute Poliomyelitis																								
Paralytic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-Paralytic ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	3	30	106	558	21	487	3	12	1	—	7	374	124	**1726**	3	17	24	78	43	109	22	11	**307**	**2033**
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery (Bacillary) ...	—	1	—	9	—	40	—	—	—	—	4	—	10	**64**	—	—	3	2	1	—	—	2	**8**	**72**
Meningococcal Infection	1	—	—	1	—	1	—	—	—	—	—	—	—	**3**	—	—	—	—	—	—	—	—	—	**3**
Pneumonia	—	3	2	15	7	16	—	2	—	1	—	1	19	**66**	4	6	5	5	7	2	9	2	**40**	**106**
Smallpox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute Encephalitis																								
Infectious	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Post Infectious ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric or Typhoid Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Paratyphoid Fever ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas...	—	—	1	3	—	—	—	—	—	—	—	—	1	**5**	1	2	1	—	1	—	—	—	**5**	**10**
Food Poisoning ...	—	—	—	5	—	—	—	—	—	—	—	—	—	**5**	5	—	—	—	2	3	1	4	**15**	**20**
Puerperal Pyrexia ...	—	—	—	—	—	1	—	—	—	—	—	—	3	**4**	—	—	—	—	—	1	1	—	**2**	**6**
Ophthalmia Neonatorum	—	1	—	—	—	—	—	—	—	—	—	—	—	**1**	—	—	—	—	—	—	—	—	—	**1**
Tuberculosis of the Respiratory System ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other forms of Tuberculosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infective Hepatitis ...	8	1	—	40	1	24	1	2	1	—	—	—	—	**78**	5	2	2	1	—	—	—	—	**10**	**88**
Totals	**12**	**57**	**111**	**648**	**32**	**578**	**14**	**16**	**2**	**33**	**11**	**378**	**166**	**2058**	**25**	**39**	**49**	**89**	**98**	**117**	**37**	**31**	**485**	**2543**

2. VACCINATION AND IMMUNISATION

(a) General

Protection is offered against smallpox, diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis and, for those going abroad to yellow fever areas, against that disease. Extensive use is made of triple vaccine, which gives combined protection against diphtheria, whooping cough and tetanus, and is used in County Council clinics, as well as in the surgeries of almost all general practitioners throughout the county. The state of immunisation against the most important diseases will now be reviewed, with the exception of tuberculosis which is dealt with in Part II (page 8).

(b) Diphtheria

As has just been mentioned, the vaccine in general use is the triple variety, which affords protection, not merely against diphtheria, but also against whooping cough and tetanus.

The following table shows the number of children at December 31st, 1962, who had completed a course of immunisation against diphtheria at any time since January 1st, 1948 :

Age on 31/12/1962 (*i.e., born in year*)	*Under* 1 1962	1-4 1958-1961	5-9 1953-1957	10-14 1948-1952	*Under* 15 *Total*
Number immunised	1,278	15,212	16,791	15,677	48,958
Estimated mid-year child population ...	5,330	20,470	48,600		74,400
Estimated percentage immunised ...	64%		67%		66%

It will be seen that approximately two out of every three children have been immunised against diphtheria. This figure can only be an approximation and is, in fact, likely to be an under-estimate for two reasons. In the first place, some family doctors do not send in immunisation records as they are completed, but prefer to gather them until a substantial number are ready for despatch to the County Health Department. Some, therefore, fail to be included in the year's figures. Secondly, not all children born in 1962 were old enough for immunisation before the end of the year and, if these were excluded, there would be an increase in the proportion of those who had been immunised.

Maintaining an adequate standard of immunisation against diphtheria is becoming progressively more difficult from year to year, as the past success of the scheme has resulted in a drop in the number of cases of the disease so that, as far as Northamptonshire is concerned, the last one occurred in 1956, and the last death in 1945. It is accordingly less easy to persuade mothers of the importance of ensuring the safety of their babies by having them immunised. It cannot too often be emphasised that diphtheria can still occur and can still kill, and that parents have a duty both towards their children and towards the community. Immunisation is free, and is readily available through family doctors or child welfare clinics. To fail to take advantage of the facilities offered is to neglect the welfare of the children.

(c) Smallpox

The percentages of infants under one year who have been vaccinated since 1949 are shown in the graph.


SMALLPOX
PERCENTAGES OF INFANTS UNDER 1 YEAR VACCINATED 1949-1962
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
1949
1950
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
1961
1962

Attempts to attain an adequate level of protection have led to a gradual improvement over the years till, in 1962, some 60% were vaccinated. As with diphtheria immunisation, this is certainly an under-estimate.

On analysing the 1962 figures further, the ages of those vaccinated and the type of vaccination performed are as follows :

	Primary	*Revaccination*
Under 1 year	3,180	—
1-4 years	2,022	176
5-14 years	5,897	2,596
Over 15 years	9,395	10,154
Totals ...	20,494	12,926
Grand Total ...	33,420	

It will be seen that there were no fewer than 20,494 primary vaccinations during the year, of which 11,099 were in children under the age of 15, thus helping to make up the deficits of previous years. It would be pleasant to be able to claim that this resurgence of vaccination was the result of the efforts of the staff of the County Health Department, but it is more honest to state that it stems largely from public reaction following the importation of smallpox elsewhere in the country. No cases of the disease occurred in Northamptonshire, although various contacts were kept under observation, but public clamour for vaccination was considerable and, in a few cases, family doctors were subjected to heavy demands. It can only be hoped that some good will result from the episode in the form of a rise in the level of infant vaccination from now onwards but, human nature being what it is, it is perhaps better not to be too optimistic.

Towards the end of the year a circular from the Ministry of Health announced the opinion of the Standing Medical Advisory Committee that routine vaccination of children was important, and should be continued during the first two years of life, with preference for the second year. This last recommendation favours vaccination rather later than has hitherto been the general case and, if widely implemented by practitioners, means that there will be fewer infants vaccinated under the age of one in future years. Further reference to the subject will therefore have to be made in the annual report for 1963.

(d) Poliomyelitis

It is now clear that vaccination against this disease has resulted in a definite fall in its incidence. During the past four years (1959-62) there were only two cases in Northamptonshire, compared with 97 in the previous similar period (1955-58). The progress since the commencement of the immunisation campaign can be seen from the following table :

Age	*Under* 5	5 *to* 9	10 *to* 14	15 *or over*	*Total*	*Grand Total*
1956	409	688	—	—	1,097	
1957	1,114	4,769	1,374	—	7,257	
1958	11,667	10,407	13,348	4,775	40,197	
1959	5,131	2,758	2,844	16,079	26,812	115,435*
1960	3,957	632	628	18,891	24,108	
1961	3,867	972	804	5,383	11,026	
1962	3,046(2,217)	251(142)	185(70)	1,456(548)	4,938(2,977)	

* Of this total, 105,990 persons had received three injections and 25,998 children between 5 and 11 year (inclusive) had received four injections.

For the first six years, immunisation was by means of the injected (Salk) vaccine but, from March 1962 onwards, increasing use was made of the oral (Sabin) preparation, the figures for which are shown in brackets in the table. By the end of the year, county council clinics were using the Sabin vaccine almost exclusively, as were the majority of family doctors. The change to the Sabin vaccine was made not on the grounds of convenience, but because there is good reason to believe that this vaccine will achieve a better and longer-lasting immunity than will the other variety. The infants, whose pin-cushion bottoms will thus be spared, no doubt concur in the preference for oral vaccination.

(e) Yellow Fever

Vaccination was performed on 242 persons who were going abroad to yellow fever areas, a fee of one guinea being charged for each vaccination.

3. TUBERCULOSIS

(a) Incidence and Mortality

At the end of the year 1,189 cases of respiratory tuberculosis and 348 cases of non-respiratory tuberculosis remained on the registers. There were 74 primary notifications of respiratory tuberculosis and 14 of non-respiratory disease. Twenty-nine new cases were transferred from other areas. One notification was posthumous. Table V, page 53 shows the numbers of cases notified in each district.

Deaths from respiratory tuberculosis numbered 13, and from non-respiratory disease 2. There were thus 15 deaths from all forms of tuberculosis, compared with 24 in 1961. The mortality rate was 5.0 per 100,000, the rate for the combined urban districts being 3.6, and for the combined rural districts 6.7.

The annual tuberculosis mortality rates from 1912 are shown in graph form on page 61.

(b) Mass Radiography

The No. 1 Mass Radiography Unit of the Oxford Regional Hospital Board undertook its usual work throughout the county, and a total of 48,102 persons were X-rayed. Of these, only 21 had newly-discovered significant pulmonary tuberculosis, giving a rate of 0.44 per 1,000 examinations. As one of the surveys took place within the county borough of Northampton, some of the cases do not in fact belong to the administrative county.

(c) B.C.G. Vaccination of Schoolchildren

This subject is dealt with in Part II (p. 8).

(d) Extra Nourishment Grants

Grants of free milk varying from one to three pints per day were made to 18 patients, most of whom lived in areas not covered by Voluntary Care Committees. Grants are invariably given on the recommendation of the Chest Physician without regard to the family income.

(e) Reports of Chest Physicians

Dr. O. E. Fisher has reported :

" Prior to the implementation of the 1946 National Health Service Act, tuberculosis work was the responsibility of the local authority. Since 1948 the clinic and hospital tuberculosis services have been transferred to the Regional Hospital Boards, whilst at the same time chest physicians ceased to be solely concerned with tuberculosis and are now responsible for the investigation and treatment of non-tuberculous respiratory disease.

Until the end of 1962, the chest services based on Rushden Hospital continued to serve the whole county. The new hospital plan setting up district general hospitals envisages a much closer integration of chest services into these, and the work carried out at Rushden Hospital will eventually be transferred to the greatly expanded general hospital at Kettering. Following the retirement, therefore, of Dr. G. B. Lord, consultant chest physician, at the end of 1961, the organisation of the chest service was more closely linked with the general hospitals by limiting the service based on Rushden Hospital to the area served by the Kettering Hospital Management Committee, whilst the county work that had been carried out in the area served by the Northampton Hospital Management Committee was taken over by the chest service based on Creaton Hospital. This report refers to the area served by Rushden Hospital, which has a population of 200,000, containing about 95% of the urban population of the county.

During 1962, 63 cases of respiratory and 8 cases of non-respiratory tuberculosis were diagnosed in the chest clinics, compared with 51 respiratory and 15 non-respiratory cases in 1961. The increase in respiratory cases in 1962 was due chiefly to the larger number of cases diagnosed amongst contacts (12 cases compared with four in 1961).

In fact, although the decline in tuberculosis has not been so dramatic as the fall in the death rate, there is no doubt that in spite of more intensive case-finding, there has been a definite falling trend of notifications in recent years, as is illustrated by the table below relating to chest clinics of the Kettering Hospital Management Committee.

New cases of tuberculosis diagnosed at chest clinics

(*Kettering Hospital Management Committee—Ten Year Period* 1953-1962)

	Respiratory Tuberculosis	*Non-Respiratory Tuberculosis*	*Total*
1953	115	15	130
1954	150	3	153
1955	101	15	116
1956	95	13	108
1957	118	12	130
1958	102	16	118
1959	75	16	91
1960	78	22	100
1961	51	15	66
1962	63	8	71

Tuberculosis admissions to hospital also continue to decline, and there were only 60 cases admitted to Rushden Hospital compared with 81 in 1961. Since 1951, tuberculosis admissions have fallen from 91% to 23% of the total admissions.

Deaths

Deaths from tuberculosis have now reached such a low figure that they no longer serve as a significant index of the amount of the disease in the community.

During the year the names of 15 patients (13 respiratory and two non-respiratory) were removed from the tuberculosis register on account of death (all causes). Examining these deaths more closely we find that the cause of death was as follows :

Cardio-vascular disease	6
Chronic bronchitis	2
Broncho-pneumonia	1
Carcinoma of bronchus	1
Carcinoma of stomach	1
Senile degeneration	1
Non-tuberculous spontaneous pneumothorax	1
Hypertensive cardiac failure and respiratory tuberculosis	1
Respiratory tuberculosis	1

Thus out of a population of 200,000 the number of deaths amongst notified cases of tuberculosis in which active tuberculosis was still present, reached the remarkably low figure of two, and in only one case was the cause of death directly attributable to tuberculosis.

Contact Examination and B.C.G. Vaccination

All known contacts are asked to attend chest clinics or the mobile X-ray unit for a chest X-ray, and for tuberculin testing in the case of persons under the age of 35 years. Tuberculin negative reactors are given B.C.G. vaccine.

			Respiratory Tuberculosis		*Non-Respiratory Tuberculosis*	
Year	*Contacts examined*	*B.C.G. Vaccinations*	*Total*	*Cases discovered in contacts*	*Total*	*Cases discovered in contacts*
1958	966	411	102	8	16	Nil
1959	869	396	75	4	16	1
1960	831	477	78	3	22	1
1961	798	507	51	4	15	1
1962	580	355	63	12	8	Nil

In addition to family contacts the problem of examination of contacts of infectious cases of tuberculosis at work has been simplified by the fact that the mass radiography service now operates a mobile X-ray unit which carries out request surveys. It is now a routine practice whenever a new case of tuberculosis is diagnosed to carry out a mass radiography survey of the office or factory in which the patient was working.

Mass Radiography

The mass radiography service now operates two units, one to carry out the routine community surveys, and a second highly mobile unit for general practitioner referral work, and for surveys of small selected groups.

The only community survey carried out during the year was at Wellingborough, where a survey that was commenced the previous year was completed. The table below gives the number of persons examined and the number of cases of respiratory tuberculosis so far discovered by the two units.

	Community Surveys	*X-ray of special groups (G.P. referral, factory contacts, school children, positive tuberculin reactors)*
Persons X-rayed	3,222	3,035
Referred to chest clinics	20	102
Diagnosed active resp. tuberculosis ...	Nil	6
Not yet diagnosed	1	3

Although these figures are too small for firm conclusions to be drawn it is noteworthy that all six cases of tuberculosis were discovered by the unit carrying out selective surveys, and that the number of abnormalities picked up by this unit were over five times as great as the unit carrying out community surveys. The implications to be drawn from these figures are reinforced by Dr. Gerrard, Medical Director of the No. 1 (Northants) M.R.U., in his annual report for 1961. He has compiled a table showing the number of cases of active respiratory tuberculosis discovered annually between 1945-1961.

The total number of cases discovered in these seventeen years is 1,045 out of a total of 737,564 examinations. The pick-up rate has declined from the very high rate of 5.11 per 1,000 examinations (nearly double the national average) in 1943-46 to the extremely low rate of 0.44 per 1,000. Whilst this result is highly gratifying and is a vindication of past policy of the mass radiography service, the present low yields suggest that these repeat community surveys are now less worth while, and that more selective methods of using the service should be developed. The examination of group contacts, positive tuberculin reactors in schoolchildren, and general practitioner referral cases, are examples of selective Mass Radiography that are now carried out in the county.

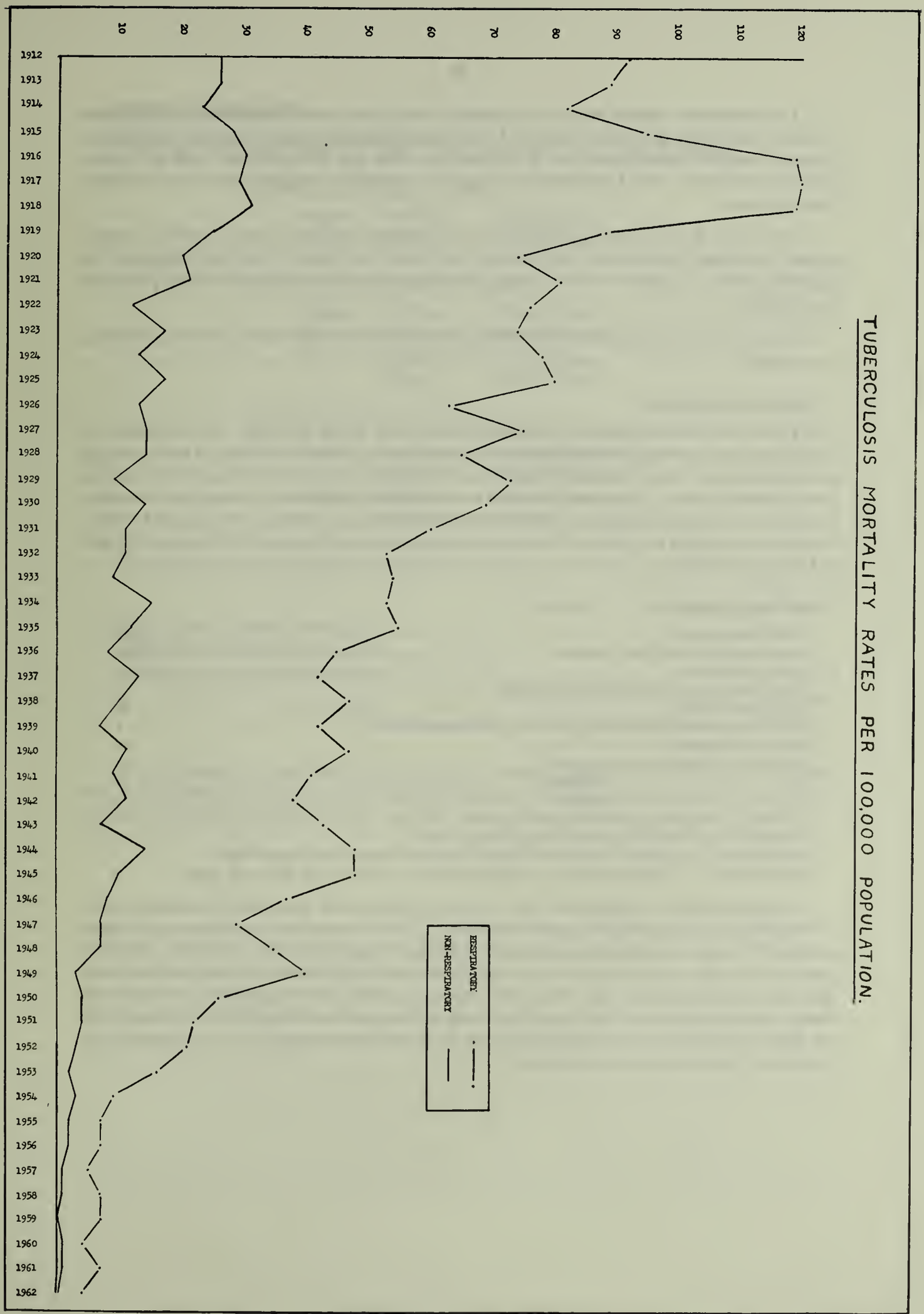
Non-Tuberculous Chest Disease

Most of the work carried out by the chest service is now concerned with the investigation and treatment of non-tuberculous respiratory illness. The following table illustrates the varied conditions now dealt with in chest clinics.

Abnormalities diagnosed amongst new cases attending chest clinics, 1962

Active respiratory tuberculosis	63
Active non-respiratory tuberculosis	8
Inactive tuberculosis	406
Bronchial carcinoma	75
Other malignant neoplasms...	6
Simple intra-thoracic neoplasms and cysts	6
Chronic bronchitis, emphysema, including cor pulmonale	208
Acute respiratory infections, including pneumonia ...	184
Asthma	26
Spontaneous pneumothorax (non-tuberculous) ...	6
Non-tuberculous effusions, including empyema ...	13
Bronchiectasis	56
Pulmonary collapse	4
Sarcoidosis	7
Pneumoconiosis	8
Hæmoptysis (unexplained)	8
Cardiac disorders	62
Miscellaneous	116
No abnormality detected	1,215

Lung cancer cases continue to increase and for the first time, hospital admissions from this condition have exceeded tuberculosis admissions.


TUBERCULOSIS MORTALITY RATES PER 100,000 POPULATION.
RESPIRATORY
NON-RESPIRATORY
10
20
30
40
50
60
70
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90
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1960
1961
1962

The commonest disease seen at out-patient clinics was chronic bronchitis. Of all chest diseases, this serious condition is now by far the most important cause of chronic disablement. Chronic bronchitis causes more loss of working time than any other disorder, and its victims only too frequently exist housebound for years as respiratory cripples before the inevitable fatal outcome.

Both these diseases pose essentially the same environmental and social problem, namely chronic bronchial irritation due to pollution of inspired air, either from the atmosphere or cigarette smoke. In neither of these diseases has treatment much to offer, and the only solution is prevention."

Dr. N. O'Leary has reported on her work in the south-west of the county, and the following is an extract :

"*Institutional treatment*

There were 65 admissions for pulmonary tuberculosis during the year. Some of these are admissions from outside the area and some re-admissions of the same patients. There were 222 other admissions. Some were for investigation only, and the remainder for treatment or nursing care of terminal cases. There were the usual acute respiratory infections, primary and secondary cancers, and bronchial asthmas. There were three cases of mycetoma, one diagnosed before, one at operation, and one a fungal infection in a tuberculous cavity responded to treatment, and did not need operation.

Chest Clinic statistics

Total attendances	1,956
New cases seen, other than contacts	580
New contacts seen	277
New notifications of pulmonary tuberculosis	8
Ante-natal X-rays	29
Cases of pulmonary tuberculosis discovered in ante-natal cases	1
B.C.G. vaccinations	80
Deaths from pulmonary tuberculosis :	
in hospital,	4
at home,	3
Patients at home with persistent positive sputum	2
Patients at home with an intermittent positive sputum	3
Patients with +ve sputum known to be resistant to two or more of the major drugs	2
Patients with +ve sputum known to be fully sensitive to two or more of the major drugs	3

Of the eight cases notified, three had a positive sputum with drug sensitive organisms, and all responded to treatment with sputum conversion. The one ante-natal case discovered to have an early lesion was also known as a contact, and cleared completely with treatment. The two patients with drug resistant organisms in sputum are practically house-fast and constitute very little risk to their environment. Two of the three cases with sensitive organisms have had such severe toxic reactions to at least two of the drugs as to make them ineligible for treatment, and the third is also rather intolerant and cannot be given chemotherapy as an out-patient, but comes into hospital at intervals for this."

4. VENEREAL DISEASES

Clinics for the diagnosis and treatment of venereal diseases are held as follows :

KETTERING, ST. MARY'S HOSPITAL

Females	Tuesday	5.30-6.30 p.m.
Males	Tuesday	6.30-7.30 p.m.

NORTHAMPTON GENERAL HOSPITAL

Females	Monday	5.00-6.30 p.m.
	Friday	2.30-4.00 p.m.
Males	Wednesday	2.00-3.00 p.m.
	Friday	5.00-6.30 p.m.

PETERBOROUGH MEMORIAL HOSPITAL

Females	Tuesday	10.30-12.30 p.m.
	Thursday	4.30-6.30 p.m.
Males	Monday	4.30-6.00 p.m.
	Wednesday	5.30-7.00 p.m.

The numbers of county patients attending for the first time were :

	Syphilis	*Gonorrhoea*	*Other Conditions*
St. Mary's Hospital, Kettering	5	12	33
Northampton General Hospital	1	22	62
Peterborough Memorial Hospital	—	1	4
Total	6	35	99

It is interesting to note that the incidence of venereal disease in the county has varied remarkably little in recent years, and there is certainly no evidence of the upward trend which has been claimed in other parts of the country.

LIAISON ARRANGEMENTS

If a health department is to fulfil its function it must have widespread liaison arrangements both with the other two branches of the National Health Service, with voluntary bodies, and with other departments of the County Council. This section of the report gives a brief account of some of the arrangements which are in force.

(a) Hospitals. The County Medical Officer of Health is a member of the Management Committee of St. Crispin and Northampton General Hospitals, and is a Governor of the United Oxford Hospitals. He is also a member of the Medical Advisory Committee of Kettering General Hospital. Further co-ordination of plans is provided by the Medical Officers of Health Liaison Committee at which representatives of all local health authorities and of the Regional Hospital Board and Ministry of Health meet quarterly to discuss matters of common interest. Apart, however, from these official contacts, many members of the county health department carry out their duties in close relationship with hospitals. The Deputy County Medical Officer of Health, the Superintendent Nursing Officer, and other members of staff, take part in lectures and demonstrations for student nurses. The nursing and midwifery services of the county co-operate with the hospitals both through refresher courses and in the course of dealing with individual patients.

(b) General Practitioners. Once again, all members of the staff of the county health department are in regular contact with the family doctors of the county, and the County Medical Officer of Health is a member of the Local Medical Committee. It is hoped in 1963 to produce a new booklet for general practitioners, describing the range of services of the county health department in order that the fullest possible use may be made of them in order to help patients.

(c) Voluntary Organisations. The voluntary organisations of the county are essential to the work of the department, and a full list of those which assist in various aspects of pre vention of illness or after-care would be a very long one. Many members of the staff serve on the committees of voluntary organisations, and the increase in the range of statutory services which has taken place since the coming of the National Health Service in 1948 has certainly not reduced the total volume of voluntary work carried out.

(d) Other Departments of the County Council

(i) *County Welfare Department.* There is an arrangement whereby the occupational therapists employed as mental welfare officer/craft instructors by the County Health Committee share certain parts of their work with the welfare officer/craft instructors employed by the County Welfare Committee. This provides a better service to the public, as well as reducing the total cost to the County Council. At an individual level, there is consultation between members of the field staff. The links between the two departments will be further strengthened by the setting up of the joint Sub-Committee of the County Health and Welfare Committees, which was proposed in the Ten-year Plan, and accepted by the County Council.

(ii) *Children's Department.* Towards the end of the year the arrangements for Co-ordinating Committee conferences on problem families were altered to include area meetings throughout the county. The Deputy County Medical Officer of Health acts as Deputy Chairman

of these meetings, which are also attended by the District Medical Officers and health visitors concerned. Although it will be some time before the full impact of this system is felt, it is already obvious that greater co-operation between the many social services involved has resulted. The County Health Department will gain considerably from this continuous close connection with the Children's Department.

(e) Health and Welfare of County Council Staff. Medical officers of the Health Department are responsible for all superannuation examinations required in connection with employment by the County Council. They also undertake the examination of intending teachers, both prior to admission to training colleges, and before taking up appointments. As far as the County Fire Brigade is concerned, medical examinations are carried out by general practitioners and forwarded to the County Medical Officer, who advises the Chief Fire Officer on all aspects of employment.

In addition to medical examinations on taking up employment, the department is consulted by chief officers about matters concerning the health and welfare of their staff, and in this respect it functions as would an industrial medical service. Once the office accommodation situation improves, it would be very helpful if a small consulting room could be made available for this type of work.

(f) Licence Department. One interesting aspect of the Health Department's work is the provision of advice to the Licence Department on the medical fitness of drivers. In some instances, medical examinations are arranged and carried out by members of the county medical staff and, in others, arrangements are made in consultation with the family doctors for specialists' opinions to be obtained.

(g) Civil Defence. There is a close link between the Civil Defence Department and the Health Department, particularly regarding the operation of ambulance services in an emergency. The County Ambulance Officer plays an active rôle both administratively and as an instructor.

(h) County Planning Department. Enquiries are received from this department about the medical aspects of town and country planning.

RESEARCH, PUBLICATIONS AND POSTGRADUATE VISITORS

Research is an essential component of every branch of medicine as, without it, progress cannot be made, nor can patterns of care be adjusted to meet current needs. There is a popular and fallacious impression that research is the exclusive prerogative of high-powered bodies such as the Medical Research Council and the universities. Whilst it is true that the major part of research must belong to these organisations, there is, nevertheless, scope for investigations, not merely in laboratories and hospitals, but also in general practice and in the field of public health. This research may be carried out either by individuals or by teams, and local health authorities, which have enormous amounts of potential research material within their routine work, should encourage research amongst their staff, as well as providing facilities for workers from specialised institutions.

During 1962, three investigations were carried out in Northamptonshire. The first was part of a survey of the incidence of young chronic sick patients within the Oxford Regional Hospital Board's area. A year or two previously, almoners in the region had tried to estimate the numbers and needs of the young chronic sick, but had found it difficult to make a complete survey. Accordingly, the Medical Officers of Health Liaison Committee felt it would be useful to have full information on this subject, and a questionary was sent to local health authorities requesting both clinical and social details of each patient. These questionaries were completed by health visitors and were subsequently correlated by the Oxford Regional Hospital Board.

Investigations were also begun in the county by Dr. R. Crossley of the Medical Research Council's Population Genetics Research Unit at Oxford into certain congenital abnormalities. Dr. Crossley was interested in the cause of anencephaly, spina bifida and hydrocephaly, and wished to investigate the families of each abnormal baby born since 1950. Since Dr. M. J. Pleydell's researches into congenital defects some years ago, the department has maintained a register of cases born in the county, and was thus in a position to provide a basis for further investigations. Dr. Crossley drew up a list of questions concerning the family history, the nationality and place of origin of the families of both parents. He explained his work to the health visitors, who then visited each family concerned and, with very few exceptions, met with full co-operation from the parents. Unfortunately, this project came to an end with the untimely death of Dr. Crossley.

The third investigation was carried out in Corby by Dr. N. M. Kamel, a postgraduate student of the London School of Hygiene and Tropical Medicine. This enquiry was into the use made of various sources of advice such as family doctors, health visitors and child welfare clinics by the mothers of young children.

Within the department, a review was made of the development of Junior Training Centres, with special reference to the current situation whereby attendance has been made compulsory on the same terms as attendance at ordinary schools. A paper, " The Development of Junior Training Centres in an English County," was published (Dyer, J. V. and Reid, J. J. A. (1962) Medical Officer, 107, 369). The following papers were also either delivered or published during the year :

" Supporting Services—an Introduction "—Reid, J. J. A. (1963), District Nursing, 5, 228. Given to the Queen's Institute of District Nursing, London, in October 1962.

" Some Public Health Aspects of Diabetes Mellitus "—Reid, J. J. A. (1963), Public Health, 77, 145. Given to Southern Branch of Society of Medical Officers of Health and the South-east Faculty of the College of General Practitioners at Portsmouth in October 1962, and to the Association of County Medical Officers in February 1963.

" Ways to detect and control diabetes "—Reid, J. J. A. (1962), Municipal Journal, 3633, 3017.

" Diabetes and the General Public "—Reid, J. J. A. (in the press). Given at Birmingham to the Midland Faculty of the College of General Practitioners in November 1962.

" Diabetic Children and School "—Reid, J. J. A. Given to the Medical and Scientific Section of the British Diabetic Association at Cambridge in September 1962.

Apart from local visitors, several doctors from overseas visited the department. In June, Dr. A. Matin, who had been awarded a World Health Organisation Fellowship to study public health practice in this country, came to us from Iran. In November, Dr. A. K. Tural, a Turkish post-graduate student at the London School of Hygiene and Tropical Medicine, came to see something of the school health service, and the following month Dr. R. Stokes of Eire, another World Health Organisation Fellow, visited the department to discuss diabetes mellitus.

In November, the County Medical Officer of Health undertook a World Health Organisation Fellowship to study the arrangements for diabetes detection and after-care in the United States of America.

FOOD AND DRUGS

The report of the Chief Inspector of Food and Drugs (F. J. Evans, Esq., D.P.A., M.I.W.M.A.) on the work done under the Food and Drugs Act, 1955, the Labelling of Food Order, 1953, and related legislation, for the year ended 31st, December, 1962.

1. SUMMARY OF SAMPLES

	Total Number taken	*Examined in Department*	*Sent to Public Analyst*	*Reported Against*
Milk	956	591	365	17
Channel Island Milk	86	—	86	1
Condensed Milk	8	—	8	—
Evaporated Milk	5	—	5	—
Cream	15	—	15	—
Ice-Cream	28	—	28	—
Butter	22	—	22	—
Margarine	11	—	11	—
Lard, Dripping and Oil	21	—	21	—
Cheese and Cheese Spread	16	—	16	—
Soup and Essence	5	—	5	—
Fish Products	21	2	19	—
Meat Products	62	5	57	7
Sausages and Sausagemeat	59	—	59	—
Potatoes	14	5	9	3
Fresh, Tinned, Dried Fruit and Vegetables	41	7	34	—
Cakes, Puddings, Bread and Biscuits ...	35	4	31	3
Jams, Marmalade, Honey, etc.	40	3	37	—
Soft Drinks	34	1	33	4
Tea, Coffee, Cocoa	15	1	14	—
Wines and Spirits	40	—	40	—
Meat and Fish Pastes	19	5	14	1
Sweets and Chocolate	23	10	13	—
Stout, Beer, Shandy	3	—	3	2
Medicines	26	1	25	—
Condiments, etc.	17	5	12	1
Potato Crisps	4	1	3	1
Meat Pies, Pasties, etc.	55	46	9	—
Sausage Rolls...	18	17	1	1
Lemonade Powder, Crystals	9	1	8	1
Suet	3	—	3	—
Flour, Baking and Custard Powders ...	11	1	10	—
Vinegar	7	—	7	—
Ground Almonds, Nuts	4	1	3	—
Table Jelly	7	1	6	—
Sugar	2	2	—	—
TOTALS	1,742	710	1,032	42

(For the year 1961 the total number of samples was 1,768)

The total number of samples submitted to the Public Analyst (1,032) was slightly higher than the figure for the previous year, which was 1,021. There was a decrease in the number of samples examined in the department, but this was accounted for by a decrease in the number of soups and meat products, many of which were taken for special purposes in 1961. Only 42 samples were reported against, a percentage of 4.1. For comparison, the percentage of unsatisfactory samples for the last five years was as follows :

1957	1958	1959	1960	1961
4.8%	5.2%	4.5%	4.8%	3.5%

2. MILK

The Public Analyst (E. Voelcker, Esq., A.R.C.S., F.R.I.C.) reported that 18 of the 451 samples of milk submitted for analysis were adulterated or below standard. Of the number of samples reported against, only 2 were adulterated with water, and this is one of the lowest figures in the history of the department.

The two samples which contained added water were from different sources, but each of them was taken from a delivery van on an ordinary round from a pint of milk which had been bottled at one of the large dairies. Legal proceedings were successfully taken, but in each case the dairy claimed that it should have been impossible for watered milk to leave their premises because of the precautions which were normally taken. There would seem to be no doubt that some human error had upset the carefully worked out safety measures laid down by the dairy management.

Ten samples were below standard in fat, but all these were due to poor quality milk produced either by the herd or by individual cows. In most cases, improvement was effected by changes in the milking procedure, and all the producers took whatever action was possible to improve the quality of the milk. Six samples were reported to be below the standard for solids-not-fat, but the freezing point test showed all these to be free from added water, and no special action was required.

The standard of the milk on sale in the County, as shown by averaging the results of the samples taken during the year, has remained remarkably consistent over the last few years. The table below shows the percentages for this year compared with the preceding four years.

	Milk		*Channel Island Milk*	
	Fat	*Solids-not-Fat*	*Fat*	*Solids-not-Fat*
1962 ...	3.58	8.93	4.52	9.23
1961 ...	3.58	8.92	4.55	9.25
1960 ...	3.53	8.89	4.48	9.27
1959 ...	3.53	8.75	4.49	9.07
1958 ...	3.65	8.75	4.65	9.14

591 informal samples of milk were tested in the department. These samples were taken from receiving dairies, where they served mainly as a preliminary to formal sampling, and at farms, where they provided information which was of value to both the department and the producer in following up reports of poor quality milk.

Included in this total are 110 samples taken from milk supplied to schools. All these samples were of satisfactory quality, giving an average content of 3.59% fat (3.55) and 8.75% solids-not-fat (8.74). The figures given in brackets are those for last year.

3. SAMPLES OTHER THAN MILK

Of the 700 samples which were taken during the year, 581 were sent to the Public Analyst, and he reported that 24 of these were unsatisfactory.

Five samples described as Chopped Ham were found to be decomposing and quite unfit for human consumption. In the opinion of the Public Analyst the meat had been undercured and bacterial action had developed, resulting in a most repulsive smell. These samples had been submitted at the request of the Chief Public Health Inspector for Kettering as a result of a complaint he had received. The Kettering Corporation took legal proceedings against the manufacturers, who were fined £10 with £43/0/6 costs.

Several other canned meat products were found to be unsatisfactory either through failure to reach a reasonable minimum meat content, or because of the use of descriptions not correctly applied. In all cases, assurances were received from the packers that suitable action was being taken to put matters right.

During the year the Food Standards Committee issued its " Report on Canned Meat ", recommending that regulations for comprehensive food standards should be made prescribing the minimum percentages of meat which should be permitted in the various descriptions of canned meat products. There is no doubt that legislation of this nature would be of great assistance in securing a reasonable degree of uniformity. The report recommends, for example, that canned poultry meat with jelly should contain at least 80% of meat, but two samples which were taken, described as " Turkey " or " Chicken " without the qualification " with jelly ", were reported by the Public Analyst to contain only 60% of meat.

The county continues to maintain an extremely good record for the meat content of sausages and sausagemeat. Pork sausages are expected to contain 65% of meat, and 52 samples had a meat content which ranged from 65% to 92%, with an average of 70.7%. (Almost the same figure as last year.) Beef sausages should contain at least 50% of meat, and 7 samples showed a range from 52% to 60%, with an average of 53.6%.

Pork pies, meat pies and sausage rolls have been examined for meat content, and although fairly wide variations were found, none of the samples had too low a percentage of meat.

Samples of Milk Biscuits and Milk Rings were found to contain no whole milk, but only the non-fat solids of milk. It is expected that an article with the adjectival description of milk should contain the whole solids of milk, and not those of skimmed milk. The manufacturers of the biscuits, however, claimed reliance on a Code of Practice dating back to 1949, which permitted the description " milk " if the biscuits contained the equivalent of 3% separated milk solids. Although the makers agreed in one case to discontinue the line, and in another to add full cream milk solids, it was considered that steps should be taken to amend the Code of Practice, and the matter was therefore specially reported to the County Council for action through the County Councils' Association.

It was stated in an advertisement that a well-known soft drink " gives sparkling energy fast and is the appetiser—the energiser ". The Public Analyst said that the liquid was nothing more than a pleasantly carbonated beverage, and that it did not contain any overt or even hidden virtue. The manufacturers withdrew the advertisement immediately.

In a number of cases claims were made that fruit juices or fruit drinks contained vitamin C without the amount in milligrams per fluid ounce being stated in the manner required by the Labelling of Food Order, 1953. In one case there was not sufficient vitamin C present to justify a claim at all. In all instances the makers agreed to re-label their products in the correct manner.

One rather unusual investigation followed a complaint from a shopper that potatoes she had bought were marked with what looked like red lead. The Public Analyst found that the samples of potatoes sent to him were contaminated by a reddish pigment containing lead and iron and were, in consequence, not fit for human consumption. It was discovered that the bags in which the potatoes were delivered were marked with daubs of red paint, and that this had splashed through on to the potatoes. The potatoes were of Italian origin, and they had been sent overland to Holland. They were imported into this country by a Rotterdam firm, who were warned of the dangers of using read lead paint to mark sacks containing foodstuffs. The Ministry of Agriculture, Fisheries and Food was advised of the action taken.

Labels were examined to see that they complied with the Labelling of Food Order, 1953, and advertisements were studied to ensure that no misleading claims were made.

Examples of descriptions requiring attention occurred when frozen vegetables were described only as " fresh vegetables " ; canned broad beans were shown to be without a statement that colouring ingredients were used ; claims were made for unspecified vitamins in tinned fruit ; Australian apples were marked " garden fresh ", and the term " dairy fed pork " was used by a manufacturer to mean " home killed ".

4. THE PRESERVATIVES IN FOOD REGULATIONS, 1962

The Public Analyst reported that he had examined the samples submitted to him for preservatives. In one case a sample of French Salad was found to contain 336 parts per million of benzoic acid. Although benzoic acid may be used as a preservative in a limited number of foods, it is not permitted in a vegetable salad. Since legal proceedings had been taken against the importers by another Authority, no further action was considered necessary, but the firm arranged to withdraw all remaining stocks from this area.

In no other sample was there any prohibited preservative, and in all cases where permitted preservatives were present, the amount did not exceed the prescribed maximum.

5. LEGAL PROCEEDINGS

Details of legal proceedings taken during the year are set out below.

			Fines	*Costs*
			£ s. d.	£ s. d.
1. Dairymen ...	Selling milk to which water had been added (26.2 per cent) ...	Food and Drugs Act, 1955, Section 2 ...	20 0 0	2 2 0
2. Dairymen ...	Selling milk to which water had been added (3.2 per cent) ...	Food and Drugs Act, 1955, Section 2 ...	10 0 0	— — —
			£30 0 0	£2 2 0

Total Fines and Costs—£32 2s. 0d.

ENVIRONMENTAL HYGIENE

1. WATER SUPPLY AND SEWAGE DISPOSAL

(a) Approval in principle

The following schemes were submitted to the County Council in accordance with the provisions of the Rural Water Supplies and Sewerage Acts, 1944-1951, and were approved in principle.

Authority	*Scheme*	*Estimated Cost*
Bucks Water Board	Water main extension, Wappenham Road, Syresham	£3,080
Mid-Northants Water Board	Proposed agricultural main at Lamport	£2,310
Brackley R.D.C.	Aston-le-Walls sewerage and sewage disposal	£20,250
	Evenley main drainage	£33,200
	Main drainage of Sulgrave, Stage 2	£25,100
	Whitfield sewerage and sewage disposal	£22,176
Daventry R.D.C.	Everdon sewerage and sewage disposal	£43,000
Northampton R.D.C.	Sewer extension to Northampton Road, Denton	£1,296
	Proposed sewerage extension to Hanslope Road and Folly Lane, Hartwell	£8,880 (towards which a contribution of £300 will be made by a private builder)
Wellingborough R.D.C.	Wilby sewerage (16 properties in Doddington Road)	£4,854 (towards which a contribution of £1,550 will be made by the owners concerned)

(b) Contributions made

The County Council agreed to make the following contributions in accordance with the approved scale.

Authority	*Sewerage Scheme*	*Estimated cost*	*Ministry of Housing and Local Government Grant*	*County Council's Contribution Capital Sum*
Brackley R.D.C.	Upper and Lower Boddington main drainage	£64,822	Half-yearly payment of £544 for 30 years	£13,900
Brixworth R.D.C.	Cottesbrooke and Creaton sewerage and sewage disposal	£56,850	Half-yearly payment of £503 for 30 years	£12,870
Daventry R.D.C.	Welton sewerage and sewage disposal	£34,600	Half-yearly payment of £239 for 30 years	£6,100
Kettering R.D.C.	Stoke Albany and Wilbarston sewerage and sewage disposal	£85,500	Half-yearly payment of £798 for 30 years	£20,425
Northampton R.D.C.	Sewer extension to Hanslope Road and Folly Lane, Hartwell	£8,800	£1,698 (capital sum)	£1,698
	Little Billing Sewerage	£4,200	£1,190 capital sum	£1,190
	Sewer extension, Northampton Road, Denton	£1,296	£335 capital sum	£335

Authority	*Sewerage Scheme*	*Estimated cost*	*Ministry of Housing and Local Government Grant*	*County Council's Contribution Capital Sum*
Oundle and Thrapston R.D.C.	Titchmarsh sewerage	£54,000	Half-yearly payment of £420 for 30 years	£10,750
Towcester R.D.C.	Shutlanger and Stoke Bruerne Sewerage	£61,081	Half-yearly payment of £424 for 30 years	£10,850
Towcester R.D.C.	Tiffield sewerage and sewage disposal	£24,259	Half-yearly payment of £213 for 30 years	£5,450
Wellingborough R.D.C.	Earls Barton sewerage and sewage disposal	£162,039	Half-yearly payment of £1,437 for 30 years	£36,770
	Wilby sewerage	£4,854	£881 (capital sum)	£881
	Great Doddington sewerage	£93,500	Half-yearly payment of £739 for 30 years	£18,900
Bucks Water Board	Mid-Bucks Water	£1,370,640 (approximately one-seventh is attributable to the rural areas in this County)	Half-yearly payment of £3,785 for 30 years	£24,760
Mid-Northampton-shire Water Board	Water Supply : Drayton Fields, Daventry	£2,370	£630 capital sum	£630
	Water Supply : Earl of Sefton Estate, Old	£4,200	£315 capital sum	£315
	Agricultural supply main to Northingworth Lodge, etc.	£4,200	£315 (capital sum)	£315

(c) **Revised Contributions**

The County Council revised its contributions in the light of revisions made by the Ministry of Housing and Local Government, as follows :

Authority	*Scheme*	*Estimated Cost*		*Ministry of Housing and Local Government Grant*		*County Council's contribution (capital sum)*	
		Original	*Revised*	*Original*	*Revised*	*Original*	*Revised*
Brackley R.D.C.	Helmdon main drainage (stage 2)	£25,615	£22,434	Half-yearly payment of £400 for 30 years	Half-yearly payment of £360 for 30 years	£8,538	£7,478
Brixworth R.D.C.	Clipston sewerage	£33,900	£34,406	Half-yearly payment of £300 for 30 years	Half-yearly payment of £315 for 30 years	£10,000 (capital sum)	£10,625 (capital sum)
Brixworth R.D.C.	Great Oxendon sewerage	£19,800	£20,237	Half-yearly payment of £200 for 30 years	Half-yearly payment of £210 for 30 years	£6,600	£6,792
Mid-North-ampton-shire Water Board	Northern Area Water supply	£571,000	£779,863	£100,000 (capital sum)	Half-yearly payment of £4,020 for 30 years	Annual payment of £5,959/16/- for 30 years	£39,750 (capital sum) and annual payment of £5,959/16/- for 30 years

2. RURAL HOUSING

The activities of rural housing authorities during 1962 are summarised in this table, which also indicates their achievements in the entire post-war period.

	Population Est. 1962	*Under construction at* 31/12/62*	*Completed up to* 31/12/61	*Completed during* 1962*	*Total post-war houses completed at* 31/12/62	*Post-war houses completed per* 1,000 *population*
Brackley	11,300	27 (12)	692	18 (18)	710	62.8
Brixworth	18,620	—(—)	696	— (6)	696	37.4
Daventry	16,050	—(16)	979	24 (38)	1,003	62.5
Kettering	11,670	8 (39)	789	39 (60)	828	71.0
Northampton ...	28,250	13 (11)	1,716	23 (27)	1,739	61.6
Oundle and Thrapston	18,890	13 (32)	780	40 (38)	820	42.9
Towcester	15,460	24 (22)	1,095	16 (26)	1,111	71.9
Wellingborough ...	13,770	3 (7)	909	9 (26)	918	66.7
Totals	134,010	88 (139)	7,656	169 (239)	7,825	MEAN= 58.4

* Figures in parentheses show corresponding statistics for 1961.

The building of 7,825 post-war houses by the Rural Districts, whose total population is 134,010, represents one new house for every 17.1 persons. During 1962, a total of 971 houses were completed by private enterprise, making a post-war total of 6,675, or one new house for every 20.1 persons. Combining these figures for public and private housing, a total of 14,500 houses have been completed in the rural districts of the County since the war, representing one for every 9.2 members of the population.

CAUSES OF DEATH	Brackley M.B.		Burton Latimer U.D.		Corby U.D.		Daventry M.B.		Desboro' U.D.		Higham Ferrers M.B.		Irthlingborough U.D.		Kettering M.B.		Oundle U.D.		Raunds U.D.		Rothwell U.D.		Rushden U.D.		Wellingborough U.D.		Aggregate of U.D'S.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ALL CAUSES	26	25	15	27	107	86	57	45	29	38	21	19	27	35	234	223	16	34	27	37	33	32	108	95	225	203	925	899
1 Tuberculosis, respiratory	...	...	...	...	1	1	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	3	2
2 Tuberculosis, other	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1
3 Syphilitic disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	2	...
4 Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Meningococcal infections	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
7 Acute Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8 Measles	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
9 Other infective and parasitic diseases	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	2
10 Malignant neoplasm, stomach	2	...	...	1	3	2	...	...	3	1	...	...	1	2	11	2	...	...	...	1	1	...	2	...	4	3	27	12
11 Malignant neoplasm, lung, bronchus	1	...	...	...	8	1	7	...	1	2	1	...	2	3	12	1	...	1	3	...	2	...	9	...	26	1	72	9
12 Malignant neoplasm, breast	...	1	...	1	...	3	...	1	...	1	...	...	...	4	...	12	...	...	...	1	...	2	...	6	...	10	...	42
13 Malignant neoplasm, uterus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	1	...	1	...	3	...	8
14 Other malignant & lymphatic neoplasms	4	1	...	1	7	10	3	2	4	2	3	2	3	2	13	20	1	6	3	3	4	4	13	12	18	16	76	81
15 Leukaemia, aleukaemia	...	...	...	...	...	2	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	1	2	3
16 Diabetes	...	...	...	...	...	2	1	1	...	...	...	...	...	1	1	1	...	...	...	1	...	...	...	1	3	...	5	7
17 Vascular lesions of nervous system	3	3	2	4	4	12	11	9	3	11	4	3	3	6	24	36	4	4	5	4	4	4	12	12	23	36	102	144
18 Coronary disease, angina	7	3	3	7	24	8	5	5	6	2	3	5	6	...	46	36	3	5	4	7	8	6	14	10	37	26	166	120
19 Hypertension with heart disease	...	1	...	2	2	4	...	1	...	1	...	1	...	3	8	7	...	...	...	...	...	1	2	6	5	11	17	38
20 Other heart disease	4	1	2	5	13	9	12	10	4	9	5	4	3	8	29	37	2	7	2	11	3	4	15	13	36	42	130	160
21 Other circulatory disease	...	1	1	...	1	3	3	1	1	1	1	2	1	2	5	10	...	...	1	...	1	3	5	9	8	12	28	44
22 Influenza	...	...	2	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	2	4	5
23 Pneumonia	1	2	...	...	2	4	1	...	...	1	1	...	...	...	9	7	...	5	...	...	1	2	5	7	4	7	24	35
24 Bronchitis	...	...	3	1	7	...	1	1	2	2	1	1	2	...	26	12	1	2	2	1	1	2	8	2	20	4	74	28
25 Other diseases of respiratory system	...	1	...	...	1	...	...	...	...	...	1	...	...	...	4	2	1	1	...	...	...	...	1	1	2	...	10	5
26 Ulcer of stomach and duodenum	...	...	1	...	1	1	2	...	...	...	...	...	2	...	3	1	...	1	1	...	1	1	4	2	3	...	18	6
27 Gastritis, enteritis and diarrhoea	...	...	...	...	...	...	2	1	...	...	...	...	...	...	3	2	...	...	...	...	...	...	1	1	...	...	6	4
28 Nephritis and nephrosis	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	5	...	...	...	...	...	...	1	1	2	1	5	8
29 Hyperplasia of prostate	...	...	...	...	...	...	...	...	1	...	...	...	...	...	4	...	...	...	1	...	2	...	1	...	2	...	11	...
30 Pregnancy, childbirth, abortion	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
31 Congenital malformations	...	1	...	1	2	4	...	...	1	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1	1	1	8	9
32 Other defined and ill-defined diseases	2	6	...	1	16	16	6	13	1	3	...	1	1	2	16	17	3	2	4	4	4	1	8	7	21	15	82	88
33 Motor vehicle accidents	1	...	...	...	2	...	...	...	...	...	1	...	1	...	4	2	...	...	...	...	...	...	1	1	3	2	13	5
34 All other accidents	1	1	...	1	6	1	1	...	1	2	...	...	1	...	8	6	...	...	1	3	1	...	3	2	3	6	26	22
35 Suicide	...	...	1	1	5	1	...	...	1	...	...	...	...	1	2	2	...	...	...	...	...	...	1	...	2	3	12	8
36 Homicide and operations of war	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Live Births — Total	42	42	30	35	531	474	56	55	25	34	23	25	36	39	337	316	25	30	33	28	35	31	141	152	290	286	1604	1547
Live Births — Legitimate	41	38	27	32	507	454	55	55	25	32	22	24	36	36	316	303	24	27	33	27	35	29	134	144	249	269	1504	1470
Live Births — Illegitimate	1	4	3	3	24	20	1	...	...	2	1	1	...	3	21	13	1	3	...	1	...	2	7	8	41	12	100	77
Still Births — Total	...	1	...	...	12	10	1	2	...	1	1	2	...	...	4	3	...	...	...	1	2	...	3	...	6	2	29	22
Still Births — Legitimate	...	1	...	...	10	9	1	2	...	1	1	2	...	...	3	3	...	...	...	1	2	...	3	...	6	2	26	21
Still Births — Illegitimate	...	...	...	...	2	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3	1
Deaths of Infants under 1 year of age — Total	2	3	...	1	14	12	2	...	...	...	...	...	...	1	3	4	2	...	1	...	1	...	6	2	12	3	43	26
Deaths of Infants under 1 year of age — Legitimate	2	3	...	...	13	12	2	...	...	...	...	...	...	1	3	4	2	...	1	...	1	...	5	1	7	1	36	22
Deaths of Infants under 1 year of age — Illegitimate	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	5	2	7	4
Deaths of Infants under 4 weeks of age — Total	2	2	...	1	8	7	1	...	...	...	...	...	...	1	3	3	1	...	1	...	1	...	3	1	11	2	31	17
Deaths of Infants under 4 weeks of age — Legitimate	2	2	...	...	8	7	1	...	...	...	...	...	...	1	3	3	1	...	1	...	1	...	2	...	7	...	26	13
Deaths of Infants under 4 weeks of age — Illegitimate	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4	2	5	4
Deaths of Infants under 1 week of age — Total	2	2	...	1	7	7	1	...	...	...	...	...	...	1	3	1	1	...	1	...	1	...	1	...	11	1	28	13
Deaths of Infants under 1 week of age — Legitimate	2	2	...	...	7	7	1	...	...	...	...	...	...	1	3	1	1	...	1	...	1	...	1	...	7	...	24	11
Deaths of Infants under 1 week of age — Illegitimate	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	4	2
Estimated mid-year Home Population	3,520		4,410		39,460		5,980		4,620		3,830		5,210		38,650		3,350		4,610		4,790		17,470		31,050		166,950	
Comparability Factors — Births	0.96		1.01		0.80		0.94		1.05		1.04		1.08		1.07		1.37		1.16		1.13		1.12		1.05		1.00	
Comparability Factors — Deaths	1.01		1.04		2.60		0.69		0.94		1.00		1.04		0.93		0.64		0.85		0.92		0.95		0.87		1.07	

CAUSES OF DEATH IN ADMINISTRATIVE AREAS—RURAL DISTRICTS. TABLE VI. (b)

CAUSES OF DEATH.	Brackley R.D.		Brixworth R.D.		Daventry R.D.		Kettering R.D.		Northampton R.D.		Oundle and Thrapston R.D.		Towcester R.D.		Welling-borough R.D.		Aggregate of R.Ds.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
ALL CAUSES	60	58	100	129	103	85	58	67	176	155	117	89	84	89	82	57	780	729
1 Tuberculosis, respiratory	...	...	...	1	1	...	...	...	4	1	1	...	...	...	...	...	6	2
2 Tuberculosis, other	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
3 Syphilitic disease	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	3	1
4 Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Meningococcal infections	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
7 Acute Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8 Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 Other infective and parasitic diseases	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	4	...
10 Malignant neoplasm, stomach	...	2	8	2	...	1	...	2	2	2	3	4	1	2	2	2	16	17
11 Malignant neoplasm, lung, bronchus	5	...	11	2	4	...	5	...	8	1	6	1	1	1	6	...	46	5
12 Malignant neoplasm, breast	...	3	...	5	...	4	...	2	...	4	...	4	...	1	...	1	...	24
13 Malignant neoplasm, uterus	...	...	...	...	...	3	...	3	...	1	...	1	...	1	...	2	...	11
14 Other malignant & lymphatic neoplasms	10	3	14	8	6	8	3	7	13	11	13	7	7	4	7	5	73	53
15 Leukaemia, aleukaemia	1	...	2	1	1	...	1	...	2	3	3	...	...	...	2	1	12	5
16 Diabetes	...	1	...	...	2	2	...	1	1	...	...	1	...	...	...	...	3	5
17 Vascular lesions of nervous system	6	7	4	30	15	12	7	8	27	25	10	9	11	19	8	6	88	116
18 Coronary disease, angina	11	11	23	21	28	11	12	5	41	23	19	11	21	15	15	7	170	104
19 Hypertension with heart disease	1	3	1	1	1	3	2	4	5	3	1	7	...	1	...	2	11	24
20 Other heart disease	9	6	9	26	12	12	7	14	9	26	11	22	11	13	10	13	78	132
21 Other circulatory disease	4	2	4	11	7	3	3	3	12	9	3	2	8	6	3	2	44	38
22 Influenza	...	...	1	...	...	...	...	1	...	...	...	...	1	1	1	...	3	2
23 Pneumonia	1	4	2	5	5	6	2	...	8	8	5	3	4	8	3	1	30	35
24 Bronchitis	...	3	5	3	7	5	7	5	8	3	9	3	5	3	11	3	52	28
25 Other diseases of respiratory system	1	...	...	...	1	2	...	1	1	2	2	1	1	2	...	...	6	8
26 Ulcer of stomach and duodenum	...	1	...	1	2	...	...	1	2	1	3	...	...	...	2	...	9	4
27 Gastritis, enteritis and diarrhoea	...	...	1	3	1	1	...	...	1	...	...	1	...	...	1	...	4	5
28 Nephritis and nephrosis	...	1	...	...	...	...	1	...	...	...	...	1	2	1	...	1	3	4
29 Hyperplasia of prostate	2	...	1	...	2	...	...	...	2	...	1	...	...	...	1	...	9	...
30 Pregnancy, childbirth, abortion	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	3
31 Congenital malformations	...	3	1	...	...	...	...	...	1	1	2	1	3	1	...	...	7	6
32 Other defined and ill-defined diseases	7	5	9	7	3	8	2	8	16	26	6	6	7	8	4	6	54	74
33 Motor vehicle accidents	...	1	1	...	3	1	1	1	2	...	7	...	...	...	1	1	15	4
34 All other accidents	2	1	...	1	1	1	3	1	8	2	7	4	1	2	2	4	24	16
35 Suicide	...	...	2	1	1	1	...	...	1	1	1	...	...	...	3	...	8	3
36 Homicide and operations of war	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Live Births — Total	104	113	162	134	119	157	90	94	286	271	186	171	133	117	118	122	1198	1179
Live Births — Legitimate	97	110	157	129	116	151	84	90	274	266	177	158	127	113	114	116	1146	1133
Live Births — Illegitimate	7	3	5	5	3	6	6	4	12	5	9	13	6	4	4	6	52	46
Still Births — Total	2	...	1	2	4	2	1	2	4	5	3	3	1	1	...	1	16	16
Still Births — Legitimate	2	...	1	2	4	2	1	1	3	5	3	3	1	1	...	1	15	15
Still Births — Illegitimate	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1
Deaths of Infants under 1 year of age — Total	2	2	2	...	1	1	1	2	6	4	5	3	4	2	2	2	23	16
Deaths of Infants under 1 year of age — Legitimate	2	2	2	...	1	1	1	2	5	4	4	3	4	2	2	2	21	16
Deaths of Infants under 1 year of age — Illegitimate	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	...
Deaths of Infants under 4 weeks of age — Total	2	1	2	...	1	1	...	2	4	3	3	2	3	...	2	2	17	11
Deaths of Infants under 4 weeks of age — Legitimate	2	1	2	...	1	1	...	2	3	3	2	2	3	...	2	2	15	11
Deaths of Infants under 4 weeks of age — Illegitimate	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	...
Deaths of Infants under 1 week of age — Total	2	...	1	...	1	1	...	2	4	3	3	1	3	...	2	2	16	9
Deaths of Infants under 1 week of age — Legitimate	2	...	1	...	1	1	...	2	3	3	2	1	3	...	2	2	14	9
Deaths of Infants under 1 week of age — Illegitimate	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	...
Estimated mid-year Home Population	11,300		18,620		16,050		11,670		28,250		18,890		15,460		13,770		134,010	
Comparability Factors — Births	1.04		1.04		1.08		1.11		0.99		1.08		1.08		1.08		1.05	
Comparability Factors — Deaths	0.94		0.74		0.93		1.02		0.91		0.98		0.91		0.89		0.92	

TABLE VII.

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF NORTHAMPTON.

CAUSES OF DEATH	Sex	AGGREGATE OF URBAN DISTRICTS									AGGREGATE OF RURAL DISTRICTS								
		All Ages	0—	1—	5—	15—	25—	45—	65—	75—	All Ages	0—	1—	5—	15—	25—	45—	65—	75—
1 Tuberculosis, respiratory	M.	3	...	...	...	...	...	3	...	...	6	...	...	...	...	...	4	1	1
	F.	2	...	...	...	...	...	2	...	...	2	...	...	...	...	1	1	...	...
2 Tuberculosis, other	M.	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
	F.	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
3 Syphilitic disease.....	M.	2	...	...	...	...	...	...	...	2	3	...	...	...	...	...	1	1	1
	F.	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
4 Diphtheria	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 Whooping Cough.....	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 Meningococcal infections	M.	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
	F.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 Acute Poliomyelitis	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8 Measles	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 Other infective and parasitic diseases	M.	2	1	1	...	...	...	...	...	...	4	...	...	...	...	...	2	1	1
	F.	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
10 Malignant neoplasm, stomach ...	M.	27	...	...	...	...	...	10	10	7	16	...	...	...	...	...	5	3	8
	F.	12	...	...	...	...	...	6	3	3	17	...	...	...	...	...	3	4	10
11 Malignant neoplasm, lung, bronchus	M.	72	...	...	...	...	4	40	21	7	46	...	...	...	...	1	19	21	5
	F.	9	...	...	...	...	1	3	4	1	5	...	...	...	...	...	4	...	1
12 Malignant neoplasm, breast	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	42	...	...	...	...	1	20	11	10	24	...	...	...	...	3	8	8	5
13 Malignant neoplasm, uterus	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	8	...	...	...	...	1	4	2	1	11	...	...	...	...	1	4	3	3
14 Other malignant and lymphatic neoplasms	M.	76	...	...	...	2	3	16	19	36	73	...	...	...	...	3	26	19	25
	F.	81	...	1	...	1	1	25	22	31	53	...	...	2	1	5	17	8	20
15 Leukaemia, aleukaemia	M.	2	...	...	1	...	1	...	...	...	12	...	...	1	1	...	3	4	3
	F.	3	...	...	...	...	1	...	...	2	5	...	...	...	...	1	1	3	...
16 Diabetes	M.	5	...	...	1	...	...	...	3	1	3	...	...	...	...	...	...	1	2
	F.	7	...	...	...	...	...	2	1	4	5	...	...	...	...	1	1	...	3
17 Vascular lesions of nervous system.....	M.	102	...	...	...	...	1	26	24	51	88	...	...	...	...	1	14	28	45
	F.	144	...	...	...	1	...	15	41	87	116	...	...	...	...	...	17	28	71
18 Coronary disease, angina	M.	166	...	...	...	...	5	60	45	56	170	...	...	...	...	5	62	43	60
	F.	120	...	...	...	...	1	14	40	65	104	...	...	...	...	...	17	39	48
19 Hypertension, with heart disease	M.	17	...	...	...	...	...	6	7	4	11	...	...	...	...	...	4	2	5
	F.	38	...	...	...	...	...	2	15	21	24	...	...	...	...	...	1	9	14

TABLE VII. (*continued*).

CAUSES OF DEATH AT DIFFERENT PERIODS OF LIFE IN THE ADMINISTRATIVE COUNTY OF NORTHAMPTON.

CAUSES OF DEATH	Sex	AGGREGATE OF URBAN DISTRICTS									AGGREGATE OF RURAL DISTRICTS								
		All Ages	0—	1—	5—	15—	25—	45—	65—	75—	All ages	0—	1—	5—	15—	25—	45—	65—	75—
20 Other heart disease	M.	130	...	...	...	3	...	16	22	89	78	...	1	...	...	1	10	14	52
	F.	160	...	...	...	...	3	9	19	129	132	...	...	...	...	2	7	23	100
21 Other circulatory disease	M.	28	...	...	...	...	...	9	7	12	44	...	...	...	...	2	7	9	26
	F.	44	...	...	...	...	...	2	6	36	38	...	...	...	...	...	6	6	26
22 Influenza	M.	4	...	...	...	...	...	2	...	2	3	...	...	...	...	...	...	...	3
	F.	5	...	1	...	...	...	2	...	2	2	...	...	...	...	...	...	1	1
23 Pneumonia	M.	24	4	...	1	...	1	4	6	8	30	2	...	...	...	...	1	8	19
	F.	35	5	...	...	1	...	2	7	20	35	2	...	...	...	...	2	6	25
24 Bronchitis.....	M.	74	2	...	...	...	...	22	26	24	52	1	...	...	...	...	15	14	22
	F.	28	...	...	...	...	...	3	9	16	28	...	...	...	...	...	2	5	21
25 Other diseases of respiratory system.....	M.	10	1	...	...	...	1	2	3	3	6	1	1	1	...	...	2	...	1
	F.	5	...	...	...	...	1	...	2	2	8	...	...	...	...	1	1	1	5
26 Ulcer of stomach and duodenum	M.	18	...	...	...	...	...	6	5	7	9	...	...	...	...	...	...	5	4
	F.	6	...	...	...	...	...	3	...	3	4	...	...	...	...	1	...	1	2
27 Gastritis, enteritis and diarrhoea	M.	6	1	...	...	...	...	2	1	2	4	...	...	...	...	...	1	2	1
	F.	4	...	...	...	...	...	...	...	4	5	...	...	...	1	...	...	2	2
28 Nephritis and nephrosis	M.	5	...	...	...	...	1	...	2	2	3	...	...	...	...	...	2	...	1
	F.	8	...	...	...	...	...	3	1	4	4	...	...	...	...	...	1	...	3
29 Hyperplasia of prostate	M.	11	...	...	...	...	...	1	4	6	9	...	...	...	...	...	1	...	8
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 Pregnancy, childbirth, abortion	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	1	...	...	...	...	1	...	...	...	3	...	...	...	2	1	...	...	...
31 Congenital Malformations	M.	8	5	...	...	...	1	2	...	...	7	5	...	1	1	...	...	...	...
	F.	9	7	...	2	...	...	...	...	...	6	4	...	1	...	...	1	...	...
32 Other defined and ill-defined diseases	M.	82	27	...	2	1	1	12	14	25	54	13	...	...	...	3	9	12	17
	F.	88	13	4	1	3	4	17	16	30	74	10	...	...	2	1	11	14	36
33 Motor vehicle accidents.....	M.	13	...	...	1	3	4	4	...	1	15	...	...	...	5	7	2	...	1
	F.	5	...	...	...	1	1	...	2	1	4	...	1	1	...	...	1	1	...
34 All other accidents	M.	26	2	...	...	3	5	6	3	7	24	1	2	...	1	3	3	3	11
	F.	22	...	...	...	1	...	3	5	13	16	...	...	...	...	...	...	4	12
35 Suicide	M.	12	...	...	...	...	4	5	1	2	8	...	...	...	1	2	3	2	...
	F.	8	...	...	...	...	2	5	1	...	3	...	...	1	...	2	...	...	...
36 Homicide and operations of war	M.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	F.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ALL CAUSES	M.	925	43	1	6	12	32	254	223	354	780	23	5	3	9	28	196	194	322
	F.	899	26	7	4	8	19	142	207	486	729	16	1	5	6	20	106	166	409

APPENDIX

FLUORIDATION

(In view of the general public interest in the subject, a report prepared for the County Council at the request of the Health Committee is reproduced here)

FLUORIDE AND HEALTH

REPORT BY THE COUNTY MEDICAL OFFICER OF HEALTH

1. Introduction

The Health Committee has asked me to write this report for all members of the County Council in view of the current national interest in the prevention of dental caries by the fluoridation of those water supplies which are naturally deficient in fluoride ; and because of the many statements, some most alarming in nature, which have appeared in the press, usually in the form of letters to editors.

In carrying out the Health Committee's instructions, I must make it clear at the outset that my intention is not to review the entire medical and scientific literature on fluoridation, as that would be an enormous undertaking which, to be comprehensive, would have to extend into several volumes. I am, however, circulating with this letter, three documents which may be of assistance to members. The first is the Ministry of Health's pamphlet[1] on fluoridation, which provides a good summary of the position. The others,[2, 3] are publications by the British Dental Association, one of which deals with matters raised by the National Pure Water Association[4]; whilst the third pamphlet provides facts about fluoridation in the form of questions and answers. I would particularly commend this last publication because, unlike many of the statements at present being made about fluoridation, it gives precise references to the medical and scientific papers on which its conclusions are based.

Having drawn your attention to these sources of reference, I should like to outline some of the essential facts about fluoridation.

2. It is not an innovation

As will be recounted later, many people throughout the world have drunk fluoridated water since the beginning of time, the fluoride coming from the ground through which their water supplies flow. This natural aid to dental health has more recently been made available to tens of millions of people by means of controlled fluoridation, and this is now an accepted part of public health practice in more than 20 countries.

[1] Fluoridation ; Ministry of Health ; 1963.

[2] Fluoridation of water supplies—questions and answers ; British Dental Association, 1963.

[3] Appraisal of objections by the National Pure Water Association to fluoridation of water supplies ; British Dental Association, 1963.

[4] Fluoridation of public water supplies ; National Pure Water Association, 1962.

In Britain, there is a tradition of conservatism in medicine, and independent enquiries were made firstly in the United States and Canada, then by a full-scale study of the results of fluoridation in this country. Only after these had been most carefully appraised did the Minister of Health, towards the end of 1962, authorise local health authorities to proceed with fluoridation.

In Northamptonshire, the County Health Committee and the County Council have been kept continuously informed of developments since 1953 and, on October 16th, 1962, before the Minister of Health made his official announcement, the Health Committee passed the following recommendation :

> " The Health Committee welcomes the report on ' The Conduct of the Fluoridation Studies in the United Kingdom and the Results Achieved after Five Years ' and advocates as a valuable and safe contribution to the prevention of dental caries the adjustment by fluoridation of water supplies whose natural fluoride content is below the optimum level of one part per million."

At its meeting on November 15th, 1962, the County Council endorsed this recommendation and passed its views on to the County Councils Association. That body, which had had fluoridation under review for some time, had in the meantime approached the Minister of Health to encourage him to adopt an official policy in favour of fluoridation.

Fluoridation is far from being an innovation. Indeed, contrary to statements by certain opponents, few public health measures have been considered so carefully for so long before being implemented in this country.

3. Dental Aspects

It has been known for many years that the incidence of dental decay in different localities varies inversely with the amount of fluoride in the water supplies. In the United States of America, for example, children born and brought up in areas where the water contained *a natural level* of one part per million of fluoride were found to have an incidence of dental decay up to 60% lower than children coming from areas with only a trace of fluoride in the water supply. Similar observations have been made in other countries, including Britain.

In consequence of these facts, it was considered that equally beneficial results would be obtained by adding fluoride to water supplies which were deficient in this substance. This was carried out in certain parts of the United States and Canada in 1945, fluoride being added to the water supplies to raise the concentration to the optimum level of one part per million. A British government mission studied the results of these arrangements in 1952, and concluded that they led to the same effects as were obtained from drinking water containing fluoride from natural sources.

The mission accordingly concluded that fluoridation was a useful health measure and suggested that it should be introduced in selected areas of Britain in order to permit a further careful study before considering its general adoption. A full-scale scientific study was accordingly planned, and fluoridation was introduced in Watford, Kilmarnock, and in part of Anglesey. At the same time, " control areas " were established in Sutton, Ayr, and the remaining part of Anglesey. These latter areas had water supplies which were deficient in fluoride, and thus permitted a comparison with the effects of fluoridation in the first three areas, in which it was commenced in 1955/56.

The dental state of children in all areas has been continuously checked since that time, and a report[5] was published by the government departments concerned. This report revealed that,

[5] The conduct of the fluoridation studies in the United Kingdom, and the results achieved after five years ; Ministry of Health, 1962.

in three-year-old children, there was a reduction of 66% in dental decay in the fluoridated areas, the corresponding figure for four-year-olds being 57% ; for five-year-olds 50% ; for six-year-olds 26% ; and for seven-year-olds 14% respectively. The reason for these falling figures is because, to obtain the full benefit of fluoridation, it must be commenced before the beginning of tooth formation and calcification, a condition which was not fully achieved in the case of older children. What is important, however, is to compare the results with the corresponding findings in the control (non-fluoridated) areas, where the reduction in dental decay amongst similar children ranged only from 2 to 7%.

These studies have therefore fully confirmed the benefits to dental health which can be obtained by adding fluoride to water supplies deficient in that substance. The claim is not made that deficiency of fluoride is the only cause of dental caries. There are few diseases which have only one cause. Other nutritional substances are involved, as is dental hygiene, and one of the aims of health education is to teach the public about these facts, although this will be a long, up-hill struggle. It is nevertheless true that deficiency of fluoride is a contributory factor in dental decay and, no matter what progress is made in other directions, there is clearly a place for fluoridation in areas where the natural level in the water supply is below one part per million.

4. Medical, Scientific and Other Support

Fluoridation at a level of one part per million is advocated by the following national and international organisations :

Ministry of Health
British Medical Association
British Dental Association
General Dental Council
Society of Medical Officers of Health
Royal Society of Health
Irish Dental Association
American Medical Association
American National Research Council
American Commission on Chronic Illness
United States Public Health Service
Canadian Medical Association
Canadian Dental Association
Canadian Public Health Association
Expert Committee of the World Health Organisation
New Zealand Commission on Fluoridation
Royal Swedish Medical Board
Standing Dental Advisory Committee
Standing Medical Advisory Committee
Central Health Services Council
Scottish Health Services Council
Central Council for Health Education
County Councils Association
Association of Municipal Corporations
Executive Councils Association

In Northamptonshire, it is advocated by :

Northamptonshire County Council
Northamptonshire Local Executive Council
Northamptonshire Local Medical Committee
(representing the general medical practitioners of the county)
Northamptonshire Local Dental Committee
(representing the dental practitioners of the county)
The County and County District Medical Officers of Health

There can be few measures in preventive medicine which have received such overwhelming support. Opponents of fluoridation make considerable capital of the fact that "medical opinion is not unanimous". Medical opinion is never unanimous—there are, and always will be, members of the medical profession whose views are at variance with those of the great majority of their colleagues, and they have every right to their minority opinions. In the case of fluoridation, however, it must be clearly recognised that opposition comes from a very small minority of the medical profession, whose representative bodies in Britain and elsewhere are firmly on the side of fluoridation.

5. Opposition to Fluoridation

There are opponents of fluoridation just as there are opponents of other preventive measures such as vaccination, immunisation, pasteurisation and chlorination. The objections of such opponents fall under two main headings, namely ethical and scientific.

(a) *Ethical Objections*

Some claim that there is an absolute ethical objection to fluoridation. This is difficult to justify when it is remembered that almost every source of water in the world contains fluoride from natural sources, and sometimes contains it at many times the recommended concentration of one part per million. Fluoridation thus consists of adjusting the level of a substance which is already present, rather than adding some new and completely foreign chemical. As I will shortly explain, there is no difference between so-called "natural" fluoride and added fluoride at the recommended concentration of one part per million.

Furthermore, a wide variety of chemicals are already added to the water supply in this country in order to render it fit for use. Chlorine (an element related to fluorine) is needed to kill micro-organisms, and many other substances are also used for a variety of purposes. It is sometimes claimed that these are added purely for reasons of safety. This is not so—some are added, for example, in order to soften hard water, and have thus no connection with health.

I fail to see how it can be unethical to add fluoride at a concentration of one part per million, and yet ethical to supply a population with water containing as much or even more fluoride derived from "natural" sources. Some 500,000 people in Britain at present live in areas in which the latter condition applies.

(b) *"Scientific" objections*

Under this heading can be classified a variety of objections, the majority of which might be better described as unscientific objections.

The first and most often repeated is that there is a difference between "natural" and artificial fluoride. The statement is commonly made that, whilst there is no objection to calcium fluoride (usually described as "natural"), there are strong objections to the use of

sodium fluoride, which is one of the possible compounds for the fluoridation of water supplies. This distinction has absolutely no scientific foundation because, at a concentration of one part per million, both calcium fluoride and sodium fluoride become ionised and separate into their constituent components of calcium, sodium and fluorine. The fluorine ions derived from calcium fluoride and from sodium fluoride are identical. This is not a matter of opinion, but of basic, scientific fact.

Another common objection is that fluoride is poisonous, this statement being commonly coupled with the declaration that doctors want to put rat poison in the water supply. The answer to that is that, at a concentration of one part per million, fluoride is not poisonous. At much higher concentrations it could indeed be poisonous, as could most of the chemicals already used in the treatment of water supplies. In addition, many other substances which we eat are, in enormous quantities, poisonous. Thus vitamin D is essential to health but, in excess, is poisonous, and iron is the same. Having met this objection, opponents of fluoridation then claim that fluoridation cannot be satisfactorily maintained at a level of one part per million. This is again untrue, as experience in Watford, Anglesey and Kilmarnock has shown in this country. Fluoride levels can be controlled with great accuracy.

It is next claimed that fluoridation causes many maladies, including diabetes, arthritis, congenital malformations, mental disorders, Mongolism, cancer, leukæmia, eczema, gastric and duodenal disturbances, kidney disease, conjunctivitis, illness in expectant mothers, and other diseases. It is also contended that damage has already been done to the health of individuals in those areas of Britain where controlled fluoridation has been practised, and that the medical profession has deliberately turned its back on these facts. These statements are quite incorrect. Extensive studies of the effects of fluoride in water in many parts of the world have clearly demonstrated that, at the proposed level of one part per million in Britain, there can be no damage to health. Precise references to the justification of this statement will be found in the British Dental Association's " Questions and Answers ". As far as the three British study areas are concerned the position is again completely satisfactory.

(c) *Other Objections*

Some of those who object to fluoridation do so on even wider grounds.

I have been sent one document which explains that fluoridation is a Communist plot designed to bring about a spirit of lethargy which will favour the growth of Communism. Another such document perhaps redresses the political balance by indicating, under the heading " Fascist methods foreshadowed ", that some future government might add more sinister substances to the water supply.

It is stated that fluoridation of the water supply is wasteful because the entire population receives it, whereas only the younger age-groups will benefit directly. That is true for the moment but, as new generations grow up, eventually all will have benefited from fluoridation during the period when their teeth were growing and developing. There would, of course, be objections if there were any element of risk involved for the older age-groups but, as I have said, there is no such risk involved in a fluoride concentration of one part per million—a level which is at present attained or exceeded from natural sources in the water supply of millions of people throughout the world.

The claim is made that fluoridation could be achieved on an individual basis by issuing fluoride tablets to those who want them. I am afraid that while this is theoretically splendid, it is not practicable as a public health proposition because the degree of co-operation and organisa-

tion required is of an order which could not be achieved throughout a sizeable section of the population. It means that from infancy until the child leaves school, a one-in-a-million solution of fluoride in water must be prepared each day. This is not easy, especially in a large family with all the other things which have to be done. Here I speak from experience, because my own children are treated in this way, and receive all drinking water from a daily stock containing fluoride (added as sodium fluoride) in a concentration of one part per million. Maintaining this régime day after day is difficult, as has been confirmed by colleagues who similarly try to protect their children's dental health, and I must confess that there have been days when circumstances have conspired to prevent the preparation of the day's stock solution.

Much play is made, by opponents of fluoridation, on the allegation that it is experimentation and, as such, is a crime of the kind tried at Nüremberg. It is certainly not experimentation in so far as nature has supplied fluoridated water to millions of people for thousands of years without any evidence of harm at a level of one part per million.

Another allegation which is periodically made is that large financial interests are at work in encouraging fluoridation because of the profits which would accrue to themselves. The aluminium industry is particularly mentioned in this connection, and it is implied that there is a sinister and cynical conspiracy to endanger the health of the population for the private gain of the commercial organisations concerned. An associated claim is that the medical and dental professions have so committed themselves to a policy of fluoridation that they cannot now retract for fear of loss of face. In reply, I can only say that I am satisfied that the attitudes of these professions to fluoridation have been determined by a study of the facts, and not by commercial interests on the one hand, or wilful blindness or conceit on the other. Incidentally, might it not equally well be claimed that the opponents of fluoridation are likewise unable to change their viewpoint for fear of loss of face ?

In conclusion, opponents of fluoridation claim that the public is entitled to a pure water supply. Water has the chemical formula H_2O, denoting that, in its pure form, it consists solely of a combination of two atoms of hydrogen and one atom of oxygen. It is, however, virtually never drunk in this form, because all natural sources of water contain a wide variety of other substances which they have picked up whilst falling to the earth as rain, or whilst in contact with the earth as streams, lakes, rivers or reservoirs. Thus, for example, the degree of hardness of water is determined by the concentration of bicarbonates or sulphates of calcium or magnesium which it contains. Still further additions may take place from contact with the pipes in which it is distributed to houses. In addition, in order to ensure that dangerous micro-organisms in the water supply are killed, it is usually treated before distribution to the public, this treatment most commonly including the addition of chlorine.

Thus water contains many chemical constituents before it is consumed, most of these having come from natural sources, but some having been added by man in the course of making it safe and more acceptable to the populace. It must here be emphasised that there is, in nature, no such thing as " pure water ", every sample from pond, stream or sky containing many substances of chemical, vegetable or animal origin. The phrase " pure water " is nevertheless commonly used, whereas a better description of a water supply fit for drinking would be " safe water ".

Fluoride, which is almost always present in natural supplies of water, certainly does not render it in any way unsafe for drinking at a level of one part per million. Those who oppose fluoridation appear to be content when this level, or even much higher levels, occur from " natural sources ", but react vigorously when the identical ion is added under the most careful scientific control at a completely safe level of one part per million.

6. Conclusion

I apologise for having written at such length, and I am only too acutely aware of the fact that I have been able to touch only on some of those aspects of fluoridation which appeared most important. I can appreciate the difficulties in assessing the relative merits of the claims advanced by the vast majority of the medical and dental profession, and those of the opponents of fluoridation, notably the National Pure Water Association. In this connection, I would stress that there is particular danger in trying to draw conclusions from quotations taken out of context, especially when no references are given which enable the reader to trace the original scientific papers (if any) from which the quotations have been taken. The selective use of quotations is scientifically valueless without such information, as it becomes impossible to assess the value of the original evidence.

I lay great stress on this question of assessing the evidence, for it is essential that decisions on this important subject should be taken in the light of precise knowledge rather than on a basis of unsubstantiated, wild and emotional claims, and vague insinuations. These are, unfortunately, all too easy to make, and tracking down the truth in each case may require many hours of studying reference works, as well as much correspondence. It is nevertheless desirable that this should be done, not least because certain of the statements of opponents of fluoridation are liable to cause needless worry amongst sections of the population. Thus, allegations about the effects of fluoridation on expectant mothers and on diabetics have been widely made and have engendered fear, despite the fact that there is no evidence of the slightest danger to either group.

If any member of the County Council wishes to consult me about some particular aspect of fluoridation, I shall be only too glad to try to assist and to supply factual information or, if need be, to obtain it. This is not a matter which can be settled in a few minutes, as it is essential that every statement should be carefully scrutinised and its validity measured. I have endeavoured to obtain as much information as possible from those who oppose fluoridation, and have tried to examine it objectively as, in advocating fluoridation at a level of one part per million, my professional colleagues and I do so only after a careful study of the facts. There is no mystery about fluoridation and, for that reason I shall always be very glad of the opportunity of discussing any point about which a member may feel in doubt.

In this report I have tried to avoid giving offence to those who oppose fluoridation, as I do not question their sincerity. Many of them also believe in nature cure, some in homeopathy, and some are anti-vaccinationists, and here again, although I cannot subscribe to their beliefs, they are assuredly entitled to hold them. I must point out, however, that the histories of many advances which are now accepted as normal parts of public health are stories of needless delay brought about by opposition from small, vociferous, but misinformed minorities. For that reason I welcome the resolution approved by the County Council on November 15th, 1962, advocating as a valuable and safe contribution to the prevention of dental caries the adjustment by fluoridation of water supplies whose natural fluoride content is below the optimum level of one part per million.

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